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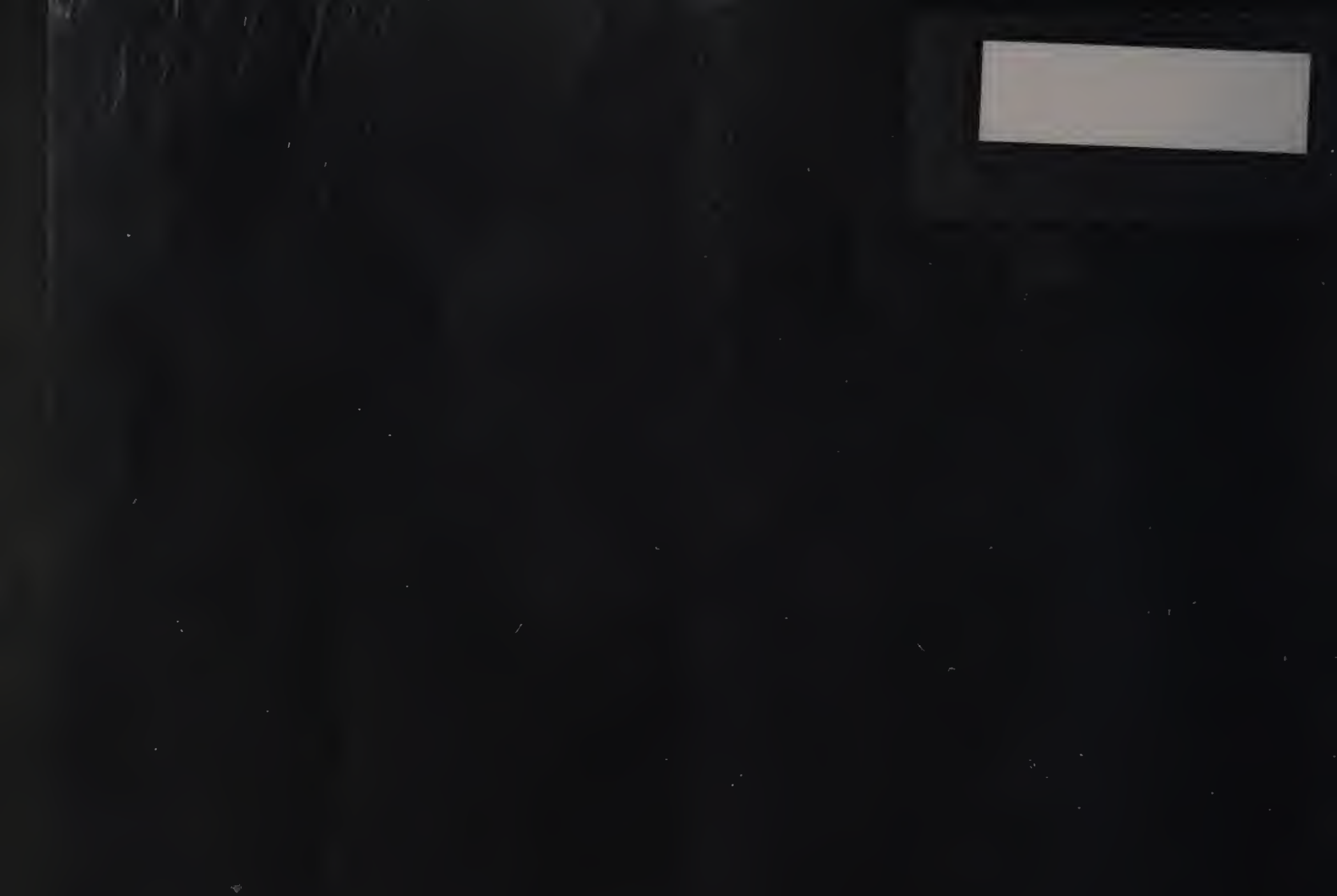

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(1)

RAM COMPLETION REPORT AND PERMANENT SOLUTION STATEMENT WITH CONDITIONS

Commercial Property
343-349 and 351 Summer Street
Somerville, Massachusetts

MassDEP RTN 3-34098

February 14, 2018

Prepared For:

351 Summer LLC
c/o The Maggiore Companies
13 Wheeling Avenue
Woburn, Massachusetts

Prepared by:

EnviroTrac Ltd.
2 Merchant Street, Suite 2
Sharon, Massachusetts 02067

A Full Service Environmental Consulting and Contracting Firm

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EnviroTrac
Environmental Services

February 27, 2018

Via UPS Ground

Kevin O'Kelly
Somerville Central Library
79 Highland Avenue
Somerville, Massachusetts 02143

Subject: **Submittal to Public Information Repository**
343-351 Summer Street
Somerville, Massachusetts
RTNs 3-34098

Dear Mr. O'Kelly:

On behalf of 351 Summer LLC (Owner), EnviroTrac Ltd. (EnviroTrac) is requesting the addition of the attached documents to the Public Information Repository (PIR) established by our letter of April 19, 2017.

Please do not hesitate to contact the undersigned with any questions or comments.

Sincerely,
EnviroTrac Ltd.

Robert H. Bird, LSP
Principal Hydrogeologist

Attachments:
1. RAM Completion Report and Permanent Solution Statement with Conditions
   343-349 Summer Street
   Somerville, Massachusetts
   RTN 3-34098
   February 14, 2018
2. Notice of Availability of RAM Completion Report and Permanent Solution Statement with Conditions – RTN 3-34098
3. Notice of Public Information Meeting – March 26, 2018

Copy: Matthew Maggiore, 351 Summer LLC
MassDEP

(2)

NOTICE OF AVAILABILITY OF RELEASE ABATEMENT MEASURE (RAM) COMPLETION REPORT AND PERMANENT SOLUTION STATEMENT

343-351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS
RTN 3-34098

A release of oil and/or hazardous materials has occurred at this location, which is a disposal site as defined by M.G.L. c. 21E, §2 and the Massachusetts Contingency Plan, 310 CMR 40.0000. On March 8, 2017, 351 Summer LLC received a petition from residents in Somerville requesting public involvement in any Immediate Response Actions and/or Release Abatement Measures taking place at this disposal site, in accordance with M.G.L. c. 21E §14(a) and 310 CMR 40.1403(9).

A Release Abatement Measure (RAM) Completion Report and Permanent Solution Statement, dated February 14, 2018, is available for review and comment as noted below. As required by the MCP (310 CMR 40.1304(9)), the public comment period for this document is now open and will close 20 days following the Public Information Meeting scheduled for Monday, March 26, 2018.

Comments on the RAM Completion Report and Permanent Solution Statement must be directed in writing to Robert H. Bird, LSP, Principal Hydrogeologist, EnviroTrac, Ltd., 2 Merchant Street, Suite 2, Sharon, MA 02067 or to robertb@envirotrac.com, with a copy to the MassDEP Regional Office noted below, and received by the end of the day on April 15, 2018.

The RAM Completion Report and Permanent Solution Statement may be viewed at the MassDEP website using Release Tracking Number (RTN) 3-34098 at http://public.dep.state.ma.us/SearchableSites2/Search.aspx or at the MassDEP Northeast Regional Office, 205B Lowell Street, Wilmington, MA 01887. A hard copy of the RAM Completion Report and Permanent Solution Statement is available at the public information repository, which has been established at the Somerville Central Library, 79 Highland Avenue, Somerville, MA 02143.

February 27, 2018

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NOTICE OF PUBLIC INFORMATION MEETING

RAM COMPLETION REPORT AND PERMANENT SOLUTION STATEMENT
343-351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS
RTN 3-34098

A release of oil and/or hazardous materials has occurred at this location, which is a disposal site as defined by M.G.L. c. 21E, §2 and the Massachusetts Contingency Plan, 310 CMR 40.0000. On March 8, 2017, 351 Summer LLC received a petition from residents in Somerville requesting public involvement in any Immediate Response Actions and/or Release Abatement Measures taking place at this disposal site, in accordance with M.G.L. c. 21E §14(a) and 310 CMR 40.1403(9).

As a result, a public meeting will be held at the Somerville Community Baptist Church, 31 College Ave., Somerville, MA at 6:00 p.m. on Monday, March 26, 2018 to present information on the Release Abatement Measure (RAM) Completion Report and Permanent Solution Statement submitted to MassDEP on February 14, 2018 and solicit public comment on same.

Any questions regarding this meeting should be directed to Robert H. Bird, LSP, EnviroTrac Ltd., 2 Merchant Street, Suite 2, Sharon, MA 02067, (781) 793-0074.

The disposal site file can be viewed at the MassDEP website using Release Tracking Number (RTN) 3-34098 at http://public.dep.state.ma.us/SearchableSites2/Search.aspx or at the MassDEP Northeast Regional Office, 205B Lowell Street, Wilmington, MA 01887. A public information repository has been established at the Somerville Central Library, 79 Highland Avenue, Somerville, MA 02143.

February 27, 2018

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EnviroTrac Environmental Services

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1.0 INTRODUCTION [310 CMR 40.1056(1)(a), (b), (c), & (d)]

EnviroTrac Ltd. (EnviroTrac) prepared this Release Abatement Measure (RAM) Completion Report and Permanent Solution Statement (PSS) with Conditions (RAMC and PSS) on behalf of 351 Summer LLC for the commercial properties located at 343-349 and 351 Summer Street in Somerville, Massachusetts. This RAMC & PSS is being submitted to the Massachusetts Department of Environmental Protection (MassDEP) to address Release Tracking Number (RTN) 3-34098. The PSS was prepared pursuant to the Massachusetts Contingency Plan (MCP) as set forth at 310 CMR 40.1040, 40.1041, and 40.1056. The RAMC was prepared pursuant to the MCP as set forth at 310 CMR 40.0446.

Based on the results of a Method 1 Risk Characterization (M1RC), a condition of No Significant Risk (NSR) has been achieved at the Disposal Site. Other conditions applicable to a Permanent Solution (310 CMR 40.1040(1)) and a Permanent Solution with No Conditions (310 CMR 40.1041(1)) have also been achieved.

This PSS is related to the Permanent Solution Statement for RTN 3-33735, since the Disposal Site boundary for RTN 3-33735 is within the Disposal Site boundary of RTN 3-34098. RTN 3-33735 was closed with a RAMC and PSS in August 2017 (as described in the next paragraph).

A RAM Plan was submitted to MassDEP on June 19, 2017 to manage potentially-impacted soil related to RTNs 3-33735 and 3-34098 during development-related construction. A RAMC and PSS was submitted to MassDEP on August 8, 2017 for RTN 3-33735; therefore, this RAMC is being submitted for RTN 3-34098 only. A RAM Status Report for RTN 3-34098, which summarized Response Actions completed from June 19 through October 17, 2017, was submitted to MassDEP on October 24, 2017. This RAMC summarizes Response Actions completed from October 18, 2017 to February 7, 2018.

1.1 Site Description [310 CMR 40.1056(2)(a)]

The Site is an approximately 0.93 acre plot of land comprised of two (2) parcels identified by the City of Somerville Assessor's Office as Map #25, Block D, Lots #33 (343-349 Summer Street) and #36 (351 Summer Street) in an area zoned Central Business District (CBD) and Residence A (RA), and is surrounded by properties zoned Residence B (RB) and Neighborhood Business (NB). The latitude and longitude of the Site are 42.39369° North and 71.11910° West, respectively. The location of the Site is depicted on **Figure 1**.

The parcel identified as 343-349 Summer Street was undeveloped, with an air vent for the Massachusetts Bay Transportation Authority (MBTA) Red Line, which runs within a bedrock tunnel approximately 80 feet below ground surface (bgs). The 343-349 parcel is located in a flat area surrounded by residences and commercial properties. Historically, the 343-349 Summer Street parcel had been the location of residential dwellings with a garage to the rear. Two (2) 60-gallon petroleum underground storage tanks (USTs) were formerly located on the parcel, which were removed in August 2017.

The parcel at 351 Summer Street was most recently used as a paved parking lot for the adjacent George Dilboy Veterans of Foreign Wars (VFW) Post #529. Historically, the 351 Summer Street parcel was used as a gasoline filling station and auto storage prior to the parcel being vacated to facilitate the construction of the MBTA Red Line beneath the property in the 1980s.

Redevelopment of the Site began in June 2017 and is ongoing. Details related to the excavation for the installation of subsurface utilities, building footprints, and underground parking garage are detailed in the RAM Status Report submitted on October 24, 2017. Prior to construction, the 343-349 parcel was unpaved/vegetated and the 351 parcel was covered by asphalt and/or concrete.

The Site is located in a mixed use commercial and residential area. The Site is bordered by the following:

North:	Residential properties
South:	Summer Street, beyond which are residential properties.
East:	Residential and commercial properties.
West:	Dilboy VFW Post #529 building/parking lot and commercial properties.

According to the 2010 U.S. Census information, the area encompassed by ZIP Code 02144 had a population of 23,891 persons within a land area of 4.1 square miles or approximately 5,972 persons per square mile. Based on a uniform population distribution, approximately 1,144 persons are expected to reside within one-half mile of the Disposal Site.

The Site Plan (**Figure 2**) depicts pertinent Site and surrounding features.

1.2 Disposal Site Boundary Description [310 CMR 40.1056(2)(a)]

A Disposal Site is defined as the portion of the Site where oil and hazardous materials have come to be located as a result of a release. RTN 3-34098 was issued due to the discovery of lead and benzo(a)pyrene at concentrations exceeding MCP RCS-1 reportable concentrations during due diligence site assessment activities on the 351 Summer Street parcel. As a result of subsequent soil sampling and laboratory analyses to support soil disposal pre-characterization, it has been documented that lead is present in soil at numerous locations on both the 343-349 and 351 Summer Street parcels. In addition, a number of polycyclic aromatic hydrocarbons (PAHs), including benzo(a)pyrene, are also present in soil samples collected throughout the Site. In addition, coal, coal ash and bituminous pavement binder have been observed in soil samples collected across the Site.

The horizontal extent of the Disposal Site encompasses the entirety of both the 343-349 and 351 Summer Street parcels and is depicted on the Site Plan (**Figure 2**). Vertically, the Disposal Site extends from the ground surface to a depth of approximately 15 feet bgs.

1.3 Sensitive Receptors

Based on information regarding MCP Priority Resources, as depicted on **Figure 3** and obtained from the Massachusetts Office of Geographic Information, the only sensitive receptors located within 500 feet of the Disposal Site are residences.

The only sensitive receptors located within one-half mile of the Disposal Site are schools and Protected Open Spaces. The nearest school is the Benjamin G. Brown School, located approximately 1,900 feet northeast of the Disposal Site. The nearest Protected Open Space is Kenney Park, located approximately 600 feet northwest of the Disposal Site.

1.4 Groundwater and Soil Classification

1.4.1 Groundwater Classification

As shown on **Figure 3**, the Disposal Site is not located within a Current or Potential Drinking Water Source Area; therefore, groundwater at the Disposal Site is not classified as GW-1. Occupied buildings are currently located within 30 feet of the Disposal Site and future use of the Disposal Site will include occupied buildings. Depth to groundwater is less than 15 feet; therefore, groundwater is classified as GW-2. Groundwater at the Disposal Site and surrounding areas are potential sources of discharge to surface water bodies and is therefore classified as GW-3. In summary, the groundwater classifications applicable to the Disposal site are GW-2 and GW-3.

1.4.2 Soil Classification

Three categories of soil (S-1, S-2, and S-3) are defined in the MCP at 310 CMR 40.0933 based on accessibility of soil to potential receptors and the frequency and intensity of use within the Disposal Site.

Currently, the Site is undergoing redevelopment. It is an active construction site, which is primarily paved or covered by a building or foundation. Current receptors include construction workers. Because excavation associated with the foundations has been completed and construction is mainly associated with structures and not excavation, current and near-term intensity of Site soil use is considered low, with the exception of potential underground utility work. Under current conditions, the S-2 and S-3 categories apply.

The Site is being redeveloped and portions of the Site currently either paved or are expected to be landscaped areas following the completion of construction. Under the redevelopment scenario, soil presently at depths between the ground surface and 15 feet bgs may be brought to the surface. Therefore, under future, planned Site use, the S-1 and S-3 categories apply.

In the future, if the Site is redeveloped again, the buildings removed, and unrestricted use is assumed, all Site soil currently located between the ground surface and 15 feet bgs across the Site would be categorized as S-1.

2.0 DESCRIPTION OF RELEASE CONDITIONS [310 CMR 40.0446(4)(a)]

The Site was used historically for residential and commercial activities, and the source of oil and hazardous materials (OHM) at the Site is believed to be associated with the historic use of coal, lead paint and bituminous asphalt. As stated in **Section 1.2**, RTN 3-34098 was issued due to the discovery of lead and benzo(a)pyrene at concentrations exceeding MCP RCS-1 reportable concentrations. One other RTN (3-33735) has been assigned to the Site, the circumstances of which are summarized in the following section.

2.1 RTN 3-33735

On August 8, 2016, EnviroTrac monitored the completion of test pits excavated to investigate the potential existence of an UST on the 343-349 Summer Street parcel. A series of trenches were excavated using a backhoe. During test pit activities, an UST (UST #1) was encountered and damaged by the backhoe. As a result of the UST containing oily liquid, approximately 20 to 30 gallons of liquid petroleum were released to the surrounding soil. MassDEP was notified of the release and RTN 3-33735 was assigned. In accordance with the approved Immediate Response

Action, approximately five tons of petroleum-impacted soil was excavated on August 12, 2016. The impacted soil was stockpiled and removed from the Disposal Site on September 23, 2017 for off-site disposal.

Also on August 12, 2016, during the excavation of impacted soil associated with UST #1, a second UST (UST #2) was encountered. No evidence of releases or leaks from UST #2 were observed. After cleaning, both UST #1 and UST #2 were removed and transported for off-site disposal.

Following the completion of excavation activities on August 12, 2016, post-excavation soil samples were collected from five to eight and one-half feet bgs and analyzed for extractable petroleum hydrocarbons (EPH) and volatile petroleum hydrocarbons (VPH) using the MassDEP methods. Five EPH target analytes were present at concentrations exceeding their MCP RCS-1 reportable concentrations.

A RAM Plan was submitted to MassDEP for RTNs 3-33735 and 3-34098 on June 21, 2017. The RAM Plan was required to manage potentially impacted soil during redevelopment of the Site. During construction on June 26, 2017, additional excavation was conducted in the area of the former USTs to approximately 10.5 feet bgs. Approximately 35.4 tons of soil was excavated and transported for off-site disposal as a result of the June 26, 2017 excavation. Post-excavation soil samples were collected and analyzed for EPH. Concentrations of EPH and target analytes were below applicable Method 1 soil standards. As a result, a RAMC and PSS for RTN 3-33735 was submitted to MassDEP on August 8, 2017.

3.0 DESCRIPTION OF THE RELEASE ABATEMENT MEASURE [310 CMR 40.0446(4)(b) & (c)]

A RAM Plan was submitted to MassDEP for RTNs 3-33735 and 3-34098 on June 21, 2017. The RAM Plan was required to manage potentially impacted soil during redevelopment of the Site. A soil pre-disposal characterization boring program was conducted in anticipation of excavation and disposal of impacted soil during construction for redevelopment. A RAM Status Report was submitted on October 24, 2017.

The following sections summarize the soil pre-disposal characterization boring program, monitoring well decommissioning, the Response Actions documented in the RAM Status Report and the excavation oversight and dust monitoring conducted since the submittal of the RAM Status Report.

3.1 Soil Pre-Disposal Characterization Boring Program

On March 28, 2017, 27 borings were advanced at the Site: 15 borings (PC-1 through PC-15) from the ground surface to approximately 15 feet bgs and 12 borings (PC-16A through PC-16C, PC-17A through PC-17C, PC-18A through PC-18C, and PC-19A through PC-19C) from the ground surface to approximately five feet bgs. On April 19, 2017, nine borings (PC-20A through PC-20C and PC-21A through PC-21C) were advanced from the ground surface to approximately eighteen inches bgs using a hand auger. All PID screening results during the advancement of each boring were BDL. The purpose of these borings was to collect the analytical data necessary to document the suitability of soil to meet the disposal acceptance criteria for specific disposal facilities. The locations of each boring are depicted on **Figure 4**.

Of the borings advanced on March 28, 20 composite soil samples (PC-1 through PC-19) were submitted for MassDEP Policy No. #COMM-97-001 analyses. Additionally, grab samples from each of the 27 borings were submitted and analyzed for lead. Of the borings advanced on April 19, two composite soil samples (PC-20 and PC-21) were also submitted for MassDEP Policy No. #COMM-97-001 analyses.

The locations of each soil sample collected from the soil pre-disposal characterization boring program were subsequently excavated and removed during excavation activities summarized in the RAM Status Report.

3.2 Monitoring Well Decommission

In anticipation of Site redevelopment, all Site-related groundwater monitoring wells were decommissioned in accordance with MassDEP regulations and guidance.

On April 19, 2017, the following monitoring wells were decommissioned: MW-1, MW-2, MW-3, MW-103, MW-105, MW-106, MW-107, MW-108, B-2/MW, and B-3/MW. Copies of monitoring well abandonment logs are included as **Appendix A**.

3.3 October 2017 RAM Status Response Actions Summary

Soil excavation was conducted from June 19 through September 1, 2017 for the following activities: subsurface utility installation, the three-story building footprint and underground parking garage, and the removal of USTs. Soil samples were screened with a PID during all excavation activities and confirmatory endpoint soil samples were collected where appropriate. The results of the endpoint samples are summarized in **Table 1** and were utilized in the M1RC (**Appendix B**).

Dust monitoring was conducted for the duration of excavation activities, as described in **Section 3.4** below. Average Site PM-10 concentrations were significantly below the action level of 150 micrograms per cubic meter ($\mu g/m^3$) during all excavation activities.

On September 15 and 21, 2017, seven borings (B-201 through B-207) were advanced to approximately eight feet bgs. Soil sample PID screening results obtained during the advancement of each boring ranged from BDL to 19.3 ppmv. Soil samples were collected from select depths at each boring and were analyzed for site-related compounds of concern (EPH, PAHs and lead). The results of these soil analyses are summarized in **Table 1** and were utilized in the M1RC (**Appendix B**).

The following is a summary of the Remediation Waste generated during the RAM Status reporting period: approximately 14,175 tons of soil, two USTs, and one 55-gallon drum of petroleum contact water.

3.4 Excavation Oversight

3.4.1 Pump Station

From January 22 through January 29, 2018, Rhino Construction Co. (Rhino) of Acton, Massachusetts excavated and installed a pump station utilized by the trench drain installed at the base of the parking garage access ramp. During excavation, EnviroTrac conducted soil

management oversight and screened soil using MassDEP Jar Headspace procedures with a photoionization detector (PID) calibrated to read "as benzene".

Rhino excavated to a maximum depth of approximately 22 bgs. All PID soil screening results were below the instrument detection limit of 0.5 ppmv. In the areas of excavation, soil from the ground surface to approximately 19 feet bgs was generally characterized as sand with brick and other debris. Soil from five to 22 feet bgs was characterized as clay and silt. All excavated soil (approximately 40 tons) was placed into a stockpile on and under polyethylene sheeting. One composite soil sample (S-76) was generated from the stockpile. The sample was placed into clean, appropriately-preserved glassware and transported under a chain of custody to Con-Test Laboratories (Con-Test) of East Longmeadow, Massachusetts and analyzed for PAHs and lead. Results of the analyses were below Method 1 soil standards. Soil from the stockpile was reused elsewhere on the Site.

The soil sample collection location is depicted in **Figure 2**. Soil data is summarized in **Table 1**. A copy of the laboratory report is provided in **Appendix C**.

3.4.2 Two-Story Building Foundation

From January 31 through February 5, 2018, Rhino excavated footings and pier locations for the installation of the two-story building foundation to a maximum depth of 11 feet bgs. All PID soil screening results were BDL. Depending upon the location, backfill (e.g., crushed stone) and/or fill material (bricks, coal ash, etc.) was observed at depths ranging from approximately the ground surface to eight feet bgs. Native soil underlying the fill was generally characterized as sand with some clay and little silt.

Three test pits were advanced within the proposed foundation excavation area on January 31, 2018 to collect soil samples for laboratory analyses. Rhino excavated to four feet bgs and all soil screening results were BDL. Soil was generally characterized as sand with some gravel and little silt. One soil sample was collected from the bottom of each test pit (S-77, 78, and 79) at approximately four feet bgs. The samples were placed into clean, appropriately-preserved glassware and transported under a chain of custody to Con-Test and analyzed for PAHs and lead. Results of the analyses were below Method 1 soil standards. Soil from the foundation excavation was reused elsewhere on the Site.

The soil sample locations are depicted in **Figure 2**. Soil data is summarized in **Table 1**. A copy of the laboratory report is provided in **Appendix C**.

3.5 Dust and Ambient Air Monitoring

Perimeter dust and ambient air monitoring was conducted during excavation activities in accordance with the provisions of the Dust Monitoring Plan included as Appendix C of the RAM Plan. On January 25 and from January 29 through February 5, 2018, real time particulate monitoring was conducted during each day of soil excavation and management. Three dust monitors (DustTRAK DRX Desktop Aerosol Monitor) were placed around the Site perimeter based on the location, nature, and intensity of construction activities and the daily forecast wind direction. The average PM-10 concentration from each unit was recorded approximately every two hours. The average Site PM-10 concentration for each two hour interval was calculated by subtracting the downwind reading from the upwind (background) reading.

As specified in the Dust Monitoring Plan, an action level of 150 µg/m^3 for the average Site PM-10 concentration was selected. This action level is conservative, as the 150 µg/m^3 value is the value of the 24-hour average PM-10 concentration specified by the U.S. Environmental Protection Agency National Ambient Air Quality Standards for particulate matter. Additionally, standard dust control measures (e.g., wetting of exposed ground surface) were employed during soil excavation and management to minimize the potential for dust generation.

As summarized in **Table 2**, the two hour average Site PM-10 concentrations were significantly below the 150 µg/m^3 action level.

4.0 CONCEPTUAL SITE MODEL [310 CMR 40.1056(2)(b)]

This section summarizes the Conceptual Site Model (CSM) for the Site, which presents the current understanding of the conditions and processes that control the source, migration and potential impacts of OHM at the Site. This CSM is based on the results of investigation activities conducted at the Site. The primary OHM of concern in soil are PAHs and lead.

4.1 Sources

The source of soil contamination at the Site is documented to have resulted from the historic use of coal and wood heating systems and the associated on-site disposal of coal ash and wood ash. In addition, the historic use of lead paint on building structures and generations of asphalt paving have resulted in the presence of associated residual chemical compounds in soil across the Disposal Site. These contaminants are defined in the MCP as "Historic Fill" and meet the definition of "Anthropogenic Background" (310 CMR 40.0006).

4.2 Environmental Fate and Transport

The environmental fate and transport of COCs detected in soil are influenced by the chemical properties of the contaminants, characteristics of the soil, and the hydrogeology at the Site.

4.3 Site Geology and Stratigraphy

Geological and stratigraphic information pertaining to the Site was obtained from a review of the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, Bedrock Geologic Map of Massachusetts, as well as field observations documented by EnviroTrac.

The Web Soil Survey characterizes the soil at the Site as Urban Land (excavated and filled land) and Merrimac-Urban land complex. The soil classification consists of approximately 60 percent Urban Land and 40 percent Merrimac-Urban land complex.

Based on observations during subsurface investigations and a review of boring logs, soil from the ground surface to approximately six feet bgs consists of fine to medium coarse sand, gravel and trace silt. Evidence of urban fill (e.g., brick, concrete, coal ash, bituminous pavement binder) was observed in this depth interval. Native soil from approximately six to 20 feet bgs consists of clay with silt.

According to the Bedrock Geologic Map of Massachusetts, bedrock at the Site is classified as Cambridge Argillite, a complex of gray argillite and minor quartzite, rare sandstone and

conglomerate. Bedrock was not encountered at the Site in soil borings that extended to 15 feet bgs.

4.4 Site Hydrogeology

Based on gauging data collected on August 17, 2016, the depth to groundwater was observed to range from 10.41 feet below grade at monitoring well MW-106 to 19.50 feet below grade at monitoring well MW-108.

A wellhead elevation survey was conducted on August 17, 2016 utilizing an assumed benchmark of 100 feet at the northeast corner of the MBTA vent pad. Utilizing the depth to water measurements at the top of casing elevations, relative water table elevations were calculated for each monitoring well. A water table elevation contour map is presented as **Figure 5**.

Based on the water table elevations contours depicted on **Figure 5**, no clearly discernable groundwater flow direction is evident. This is likely due to a number of factors, including observed Site lithology comprised of shallow sandy fill overlying clay, which results in an apparent "semi-perched" water table. In addition, historical subsurface disturbance associated with the installation of the MBTA vent is likely.

4.5 Distribution of COCs

The primary constituents of concern are EPH, PAHs, and lead derived from residual contamination associated with Historic Fill. The distribution of COCs in environmental media at the Site are discussed below.

4.5.1 Distribution in Soil

Soil samples collected in August 2016 (subsurface investigation), March and April 2017 (soil disposal pre-characterization boring program), and September 2017 (subsurface investigation) indicate that PAHs, petroleum constituents, and metals are present in overburden soil between the ground surface and approximately 15 feet bgs throughout the Disposal Site. VOCs were not detected above applicable MCP Method 1 soil standards in any soil sample collected.

4.5.2 Distribution in Groundwater

Groundwater samples were collected from Disposal Site monitoring wells in August 2016 and March 2017, which were analyzed for VOCs, volatile petroleum hydrocarbons (VPH), EPH, and metals. The groundwater samples contained no detectable VPH or EPH concentrations. The only VOC detected was acetone, which was below applicable MCP Method 1 groundwater standards. Dissolved arsenic, selenium, and zinc were reported in the groundwater at concentrations significantly below the applicable MCP Method 1 groundwater standards. Groundwater data is summarized in **Table 3**. Groundwater laboratory reports are provided in **Appendix D**.

4.6 Potential Human and Environmental Receptors

Prior to redevelopment, the 343-349 Summer Street parcel was undeveloped (with the exception of the MBTA vent) and unpaved, while the 351 Summer Street parcel was used for parking. Redevelopment of the Site began in June 2017. The Site will be redeveloped with a two new buildings intended for mixed-use residential and commercial purposes and will be primarily paved with small areas of landscaping. Future activities and uses, therefore, are expected to be

residential and commercial. No Activity and Use Limitation has been implemented; therefore, future activities and uses are assumed to be unrestricted for redevelopment and use. A more detailed discussion of receptors and exposure is included in the M1RC.

5.0 DATA USED TO SUPPORT THE PERMANENT SOLUTION

The data used to support this PSS are the soil and groundwater data collected between August 2016 and January 2018. These data are discussed where appropriate throughout this document and in the M1RC. Analytical results are summarized in **Tables 1** and **3**. Soil laboratory reports for soil samples collected between June and September 2017 are included in the October 2017 RAM Status Report. Soil laboratory reports for soil samples collected in August 2016 and January 2018 are included as **Appendix C**. Groundwater laboratory reports are included as **Appendix D**.

6.0 PERMANENT SOLUTION WITH CONDITIONS STATEMENT

The Site meets the requirements for a Permanent Solution under the MCP because: a condition of NSR to human health, safety, public welfare, and the environment exists at the Site; sources of OHM at the Site have been identified and characterized; historical sources of OHM have been eliminated, and; residual OHM at the Site are under control.

In accordance with 310 CMR 40.1041, a Permanent Solution with Conditions is the appropriate category of Permanent Solution for the Site because (1) the level of OHM in the environment has been reduced to as close to background levels as feasible as specified in 310 CMR 40.1020, (2) OHM at the Site do not exceed an applicable Upper Concentration Limit (UCL), and (3) a condition of NSR exists and will be maintained for all current and foreseeable future use of the Site with limitations, assumptions, and/or conditions on Site activities and uses that do not require an Activity and Use Limitation (AUL).

The conditions associated with this Permanent Solution include the recommendation for the use of Best Management Practices for non-commercial gardening at the property (**Appendix E**) and the presence of OHM, specifically lead and PAHs, at the disposal site consistent with Anthropogenic Background levels.

6.1 Disposal Site Boundary

The horizontal extent of the Disposal Site boundary is shown on **Figure 2**. The Disposal Site has been delineated based on data collected during Site investigations. As described in **Section 1.2**, the Disposal Site extends vertically from approximately the ground surface to 15 feet bgs.

6.2 Source Control [310 CMR 40.1056(2)(c) and (d)]

No uncontrolled sources of OHM remain at the Site. The former USTs that were the suspected source of residual petroleum hydrocarbons in soil have been removed and VOCs and petroleum constituents are not currently stored at the Site. The former UST locations are shown on **Figure 2**.

6.3 Risk Characterization

Collaborative Risk Solutions LLC completed a M1RC for the Site in accordance with the requirements of the MCP (310 CMR 40.09900, Subpart I) and MassDEP Guidance for Disposal Site Risk Characterization. The risk characterization concluded that a condition of NSR exists at the Site for all unrestricted current and future uses. The complete M1RC is included as **Appendix B**.

6.4 Activity and Use Limitations [310 CMR 40.1056(1)(e), (f), & (g) and 310 CMR 40.1056(2)(j)]

An AUL was not implemented because this PSS is based upon limitations, assumptions, and/or conditions of current and future activities and uses that do not require an AUL as specified at 310 CMR 40.1013(1)(a) and (b). As stated in **Section 4.1** above, soil contaminants at the Site are defined in the MCP as "Historic Fill" and "Anthropogenic Background". Also, the PSS is based on a recommendation of Best Management Practices (BMPS) for non-commercial gardening in a residential setting. MassDEP guidance related to BMPS is provided as **Appendix E**.

Lastly, this PSS is also not based upon the operation of one or more Active Exposure Pathway Mitigation Measures.

6.5 Operation, Maintenance, and Monitoring [310 CMR 40.1056(2)(l)]

The conditions at the Disposal Site which this PSS is based upon do not require any operation, maintenance, and/or monitoring to confirm and/or maintain those conditions.

6.6 Light Non-aqueous Phase Liquid Mobility [310 CMR 40.1056(2)(e)]

In relation to RTN 3-34098, light non-aqueous phase liquid (LNAPL) has not been encountered at the Disposal Site; therefore, a demonstration that Response Actions have been taken to adequately assess and control LNAPL mobility and meet the requirements of the MCP as set forth at 310 CMR 40.1003(7)(a) is not required.

In relation to RTN 3-33735 (whose Disposal Site boundary is within the Disposal Site boundary of RTN 3-34098), approximately 30 gallons of LNAPL was released upon encountering an UST; however, LNAPL and any LNAPL-saturated soil was excavated and removed.

6.7 Feasibility of Achieving or Approaching Background [310 CMR 40.1056(2)(g)]

The feasibility of achieving or approaching background was evaluated in accordance with MassDEP Policy #WSC-04-160 *Conducting Feasibility Evaluations under the MCP* (MassDEP, 2004). In accordance with MassDEP's Policy, it is "categorically infeasible" to return this Site to background conditions or conditions that approach background because doing so would require the remediation of persistent contaminants in S-2 and S-3 soils. In addition, the costs of implementing a remedial alternative that might approach background would be substantial and disproportionately high relative to the incremental benefit of risk reduction resulting from remediating to background levels. Specifically, the cost to implement a remedy involving further excavation of contaminated soil and/or in-situ treatment of soil and/or groundwater would exceed 20 percent of the assessment/remediation costs incurred to achieve a condition of NSR at the Disposal Site. As discussed in **Appendix A**, a condition of NSR exists at the Site.

7.0 REPRESENTRATIVENESS EVALUATION AND DATA USABILITY ASSESSMENT

To document the usability and representativeness of the data used to support this Permanent Solution Statement and to address the requirements of 310 CMR 40.1056(1)(k) and 40.1056(2)(k), EnviroTrac has developed the following summary in accordance with MassDEP's *MCP Representativeness Evaluations and Data Usability Assessment*, Policy #WSC-07-350, dated September 2007.

7.1 Representativeness Evaluation

The information presented in the following section constitutes the representativeness evaluation to support this PSS and is intended to demonstrate the adequacy of the data set used to support the Permanent Solution.

7.1.1 Field Screening Data

PID screening was conducted during subsurface investigations, excavation oversight, and stock pile soil sampling. The PID screening results were used to identify samples for laboratory analyses but were supplemented with other information when characterizing the nature and extent of contamination at the Site.

7.1.2 Sampling Rationale

The purpose of data collection activities was to address MCP requirements for evaluating the nature, extent, and potential risks posed by Site constituents. Soil sampling locations were expanded horizontally and/or vertically based on previously obtained analytical and field screening data during subsurface investigations and/or other assessment activities. Soil, samples have been analyzed for applicable COCs to assess soil concentrations.

7.1.3 Temporal Samples

Soil samples were collected from the Site between 2016 and 2018. Soil concentrations at the Disposal Site are not expected to increase in the absence of additional releases; therefore, the soil EPCs contained in the M1RC are appropriate as calculated.

At least two samples were collected from each monitoring well between August 2016 and March 2017 to investigate temporal variation in groundwater concentrations. Data show that the concentrations of OHM in groundwater at the Site are stable and do not demonstrate significant temporal variability.

7.1.4 Critical Samples

No critical samples were identified for this Site.

7.1.5 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected under normal conditions. No critical samples were identified, but the data from the other samples were all judged to be usable; therefore the completeness of the data set is 100%. No data gaps were identified.

7.1.6 Information Considered Unrepresentative

As summarized in **Table 3**, acetone was detected above the method detection limit in one groundwater sample collected in August 2016. There is no known historical Site use of acetone, and acetone is a common laboratory contaminant. Therefore, acetone in groundwater is considered unrepresentative of Site conditions, unusable for risk characterization, and was excluded from the M1RC.

In summary, the data set for the Site is internally consistent and no significant uncertainties were identified in the data used to support the Permanent Solution.

7.2 Data Usability Assessment

The following data usability assessment is composed of two parts: an analytical data usability assessment and a field data usability assessment. MassDEP has established a Compendium of Analytical Methods (CAM) for analysis of soil, water, and air samples. Data analyzed using these methods and following the QA/QC procedures described in the MassDEP Policy #WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data* (MassDEP, 2010) meet the requirements for "Presumptive Certainty", as described in the CAM.

7.2.1 Analytical Data Usability Assessment

Analytical results for the soil and groundwater samples collected from the Site were generated pursuant to the MassDEP CAM and meet the requirements for "Presumptive Certainty", as described in MassDEP Policy #WSC-CAM-VIIA.

7.2.2 Field Data Usability Assessment

Laboratory analytical data reports for samples collected between August 2016 and January 2018 are included in **Appendices C** and **D**. These reports document that the laboratory was provided with sufficient sample volumes in appropriate containers that were properly preserved and delivered to the laboratory within time periods that did not compromise analytical holding times for the analytes specified.

7.2.3 Representativeness Evaluation and Data Usability Conclusions

Based on the information presented above, it is the opinion of the LSP of Record that the data used to support the Permanent Solution are: 1) scientifically valid and defensible and of sufficient accuracy, precision, and completeness and 2) representative with respect to the spatial and temporal distribution of sampling points.

8.0 REMEDIATION WASTE [310 CMR 40.0446(4)(e)]

No Remediation Waste was generated during Response Actions completed from October 18, 2017 to February 7, 2018.

9.0 ONGOING ACTIVITIES [310 CMR 40.0446(4)(f)]

No ongoing Response Actions are required for the RAM.

10.0 RELEASE ABATEMENT MEASURE COMPLETION STATEMENT

A RAM Plan was submitted to MassDEP on June 19, 2017 to manage potentially impacted soil related to RTNs 3-33735 and 3-34098 during development-related construction. The RAM Plan was prepared pursuant to provisions of the MCP set forth at 310 CMR 40.0444 and MassDEP Policy #WSC-00-425, including a focused risk characterization for the area within and adjacent to the footprint of a proposed structure.

A RAMC and PSS was submitted to MassDEP on August 8, 2017 for RTN 3-33735; therefore, this RAMC is being submitted for RTN 3-34098 only. A RAM Status Report for RTN 3-34098, which summarized Response Actions completed from June 19 through October 17, 2017, was submitted on October 24, 2017.

A RAM Completion Statement is required since the objectives and all active and ongoing Remedial Actions related to the RAM were completed on February 5, 2017.

11.0 CONCLUSIONS [310 CMR 40.0446(4)(d)]

Based upon Response Actions completed to date and the M1RC conducted, the requirements of a Permanent Solution were achieved as summarized and outline below:

- The source of soil contamination at the Site is documented to have resulted from the historic use of coal and wood heating systems and the associated on-site disposal of coal ash and wood ash. In addition, the historic use of lead paint on building structures and generations of asphalt paving have resulted in the presence of associated residual chemical compounds in soil across the Disposal Site. These contaminants are defined in as "Historic Fill" and "Anthropogenic Background".

- Based on soil and groundwater data collected between 2016 and 2017, the horizontal extent of the Disposal Site has been defined as depicted on **Figure 2**. Based on the depth of soil samples, vertically, the Disposal Site extends from approximately 15 feet bgs.

- Soil and groundwater were identified as Exposure Points. Surface water, sediment, and air were not identified as Exposure Points.

- Potential migration pathways for COCs are vadose zone transport and saturated zone transport. Current receptors are construction and utility workers. All future receptors were evaluated as residents and construction workers in regard to soil and groundwater exposure.

- A M1RC demonstrates that a condition of NSR has been achieved at the Disposal Site.

- A Permanent Solution was achieved at the Disposal Site on the basis that all MCP requirements pursuant to 310 CMR 40.1041 were met. The implementation of an AUL is

not required to control potential exposure and to maintain NSR at the Disposal Site; therefore, a Permanent Solution with Conditions applies.

Based upon Response Actions completed to date, the objectives of the RAM were achieved as summarized and outlined below:

- A RAM Plan was required to manage potentially impacted soil related to RTNs 3-33735 and 3-34098 during development-related construction.

- A soil pre-disposal soil characterization boring program completed in March and April 2017 characterized underlying soils for on-Site reuse or off-site disposal during Site redevelopment. All monitoring wells within the Disposal Site were decommissioned in April 2017 as well.

- Based on laboratory results, soils which exhibited concentrations greater than MCP RCS-1 Reportable Concentrations were disposed of off-site following the receipt of disposal facility approval.

- Approximately 14,175 tons of soil, two USTs, and one 55-gallon drum were generated as Remediation Waste during RAM activities.

- The RAM is considered complete since the objectives and all active and ongoing Remedial Actions related to the RAM were completed on February 5, 2017.

12.0 PUBLIC INVOLVEMENT

In accordance with 310 CMR 40.1403(3)(f) and 40.0446, written notice regarding the availability of this Permanent Solution Statement and RAM Completion Statement has been provided to the chief municipal officer and director of the local health board for Somerville, Massachusetts. Copies of the public notice letters are provided in **Appendix F**. 351 Summer LLC is the only property owner within the Disposal Site boundary. An electronic version of this report will be publicly available through the MassDEP website.

Responses to public comments related to the RAM Status Report are included as **Appendix G**.

13.0 REFERENCES

Release Abatement Measure Plan. EnviroTrac Ltd. Sharon, MA. June 2017.

Release Abatement Measure Plan Status Report. EnviroTrac Ltd. Sharon, MA. October 2017.

C. Weidner, J. Fitzgerald, and M. Vallatini, 1997. Real-Time Air Monitoring at Construction and Remediation Sites to Estimate Risks of Contaminated Dust Migration.

Massachusetts Department of Environmental Protection (MassDEP), 1995. Guidance for Disposal Site Risk Characterization in Support of Massachusetts Contingency Plan. Interim Final Policy BWSC/ORS-95-141. Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup and Office of Research and Standards.

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Massachusetts Department of Environmental Protection (MassDEP), 2010. Compendium of Quality Control Requirements and Performance Standards for Selected Analytical Protocols. WSC#-10-320.

Massachusetts Department of Environmental Protection (MassDEP), 2014. Massachusetts Contingency Plan 310 CMR 40.0000.

FIGURES

SOURCE: OFFICE OF GEOGRAPHIC INFORMATION (MassGIS), COMMONWEALTH OF MASSACHUSETTS INFORMATION TECHNOLOGY DIVISION
USGS TOPOGRAPHIC MAPS: BOSTON NORTH AND BOSTON SOUTH, MA QUADRANGLES

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LOCUS MAP

COMMERCIAL PROPERTY
343-349 AND 351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS

DRAWN BY	PROJECT	DATE	FIGURE
DT	03.990202.01	10/13/2017	1

Document Path: C:\GIS Projects\Somerville\343 Summer St_Soil Sample Location Plan_021420118.mxd

LEGEND

- TREE CANOPY
- SOIL BORING
- MONITORING WELL
- HISTORIC SOIL BORING
- HISTORIC MONITORING WELL

POST-EXCAVATION SOIL SAMPLE

- NOT ANALYZED
- ANALYZED
- FORMER UST LOCATION
- FENCE
- BUILDING FOOTPRINT
- DRAINAGE INFILTRATION GALLERY
- MBTA VENT
- TEST PITS

RTN 3-34098

- DISPOSAL SITE BOUNDARY

RTN 3-33735

- DISPOSAL SITE BOUNDARY

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

0 25 50
Feet Feet
APPROXIMATE SCALE

REVISED BY: RHB
REVISION DATE: 2/14/2018

FIGURE 2

SOIL SAMPLE LOCATION PLAN

343-351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS

EnviroTrac
Environmental Services

LEGEND

- Railroads
- Pipeline
- Pipeline Arbitrary Extension
- Solid Waste Landfills
- EPA Sole Source Aquifer
- NHESP Pnonty Habitats of Rare Species
- NHESP Certified Vernal Pools
- ACECs
- Protected Open Space

Roads

- Limited Access Highway
- Multi-lane Hwy, not limited access
- Other Numbered Highway
- Major Road, Collector
- Minor Road, Arterial

USGS Hydrography

- Perennial Stream
- Intermittent Stream
- Shoreline
- Ditch/Canal
- Aqueduct
- Dam

DEP Wetlands

- Marsh/Bog
- Wooded Marsh
- Cranberry Bog
- Salt Marsh
- Open Water
- Reservoir (with PWSID)
- Tidal Flats
- Beach/Dune

Public Water Supplies

- Community Groundwater Source
- Surface Water Intake
- Non-Community Groundwater Source
- Emergency Surface Water
- DEP Approved Zone IIs
- Intenm Wellhead Protection Areas
- Surface Water Supply Zone A

Non-Potential Drinking Water Source Areas

- High-Yield
- Medium-Yield

Potentially Productive Aquifers

- High-Yield
- Medium-Yield

Data Source: Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT

0 800 1,600
Feet Feet
APPROXIMATE SCALE

REVISED BY: RHB
REVISION DATE: 7/31/2017

FIGURE 3

MassGIS PRIORITY RESOURCE MAP
500 foot and 0.5 mile Radii

343 - 351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS

EnviroTrac
Environmental Services

Path: C:\GIS Projects\Somerville\Maggiore Somerville MCP Priority Resource Map.mxd

Document Path: C:\GIS Projects\Somerville\343 Summer St_Site Plan_0012016.mxd

LEGEND

- RTN 3-34098 DISPOSAL SITE
- FENCE
- PROPOSED BUILDING FOOTPRINT
- MBTA VENT
- SOIL BORING
- MONITORING WELL
- HISTORIC SOIL BORING
- EXISTING MONITORING WELL

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

0 25 50
Feet Feet
APPROXIMATE SCALE

REVISED BY: RHB
REVISION DATE: 2/14/2018

FIGURE
4

SOIL PRE-DISPOSAL CHARACTERIZATION BORING PLAN

343-351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS

EnviroTrac
Environmental Services

Document Path: C:\GIS Projects\Somerville\343 Summer St_WTEC Plan_08172016.mxd

LEGEND

- RTN 3-34098 DISPOSAL SITE
- FENCE
- MBTA VENT
- MONITORING WELL
- EXISTING MONITORING WELL

MW-100 - WELL ID
132.68 - WATER TABLE ELEVATION (FT. MSL)
(132.68) - WATER TABLE ELEVATION NOT USED
LINE OF INTERPOLATED EQUAL WATER TABLE ELEVATION

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

0 25 50
Feet Feet
APPROXIMATE SCALE

REVISED BY: RHB
REVISION DATE: 2/14/2018

FIGURE 5

WATER TABLE ELEVATION CONTOUR PLAN

GAUGING DATE: AUGUST 17, 2016

343-351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS

EnviroTrac
Environmental Services

TABLES

TABLE 1
SUMMARY OF SOIL DATA

Commercial Property
343-351 Summer Street
Somerville, Massachusetts

Sample Date	August 8, 2016					June 21, 2017					June 23, 2017	June 26, 2017								June 27, 2017					MCP Method 1 Soil Standards (mg/kg)	
Sample ID	MW/B-103	B-104	MW-105	MW-107	MW-108	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19		
Depth (feet)	13	0-10	13.5	13	13.5	7.5	5.5	5.5	5.5	5.5	5.5	6	7	11	11	11	11	11	11	8	4	4	4	4	S-1	
PID (ppmv)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	GW-2	GW-3
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)																										
C5- C8 Aliphatics	--	<5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
C9- C12 Aliphatics	--	<5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1000
C9- C10 Aromatics	--	<5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
Benzene	--	<0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	40
Ethylbenzene	--	<0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
Methyl Tert Butyl Ether	--	<0.050	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
Naphthalene	--	<0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	500
Toluene	--	<0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
m,p-Xylene	--	<0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
o-Xylene	--	<0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
Total Xylenes	--	<0.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)																										
C9-C18 Aliphatics	<12	<9.2	<11	<11	<11	--	--	--	--	--	--	--	--	**188**	<11	<11	<11	<11	**245**	--	--	--	--	--	1,000	1,000
C19-C36 Aliphatics	<23	**21.4**	<21	<22	<22	--	--	--	--	--	--	--	--	<22	<21	<22	<21	<22	**108**	--	--	--	--	--	3,000	3,000
C11-C22 Aromatics	<23	**63.3**	<21	<22	<22	--	--	--	--	--	--	--	--	**79.3**	<21	<22	<21	<22	<23	--	--	--	--	--	1,000	1,000
Acenaphthene	<0.58	**0.5**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	1,000	1,000
Acenaphthylene	<0.58	<0.46	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	600	10
Anthracene	<0.58	**1.1**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	1,000	1,000
Benzo(a)anthracene	<0.58	**3.1**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	7	7
Benzo(a)pyrene	<0.58	**2.7**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	2	2
Benzo(b)fluoranthene	<0.58	**4.7**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	7	7
Benzo(g,h,i)perylene	<0.58	**1.5**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	1,000	1,000
Benzo(k)fluoranthene	<0.58	<0.46	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	70	70
Chrysene	<0.58	**2.7**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	70	70
Dibenz(a,h)anthracene	<0.58	<0.46	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	0.7	0.7
Fluoranthene	<0.58	**6.6**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	1,000	1,000
Fluorene	<0.58	<0.46	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	1,000	1,000
Indeno(1,2,3-cd)pyrene	<0.58	<0.46	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	7	7
2-Methylnaphthalene	<0.58	<0.46	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	**1.4**	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	80	300
Naphthalene	<0.58	<0.46	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	20	500
Phenanthrene	<0.58	**4.2**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	500	500
Pyrene	<0.58	**5.1**	<0.54	<0.55	<0.54	--	--	--	--	--	--	--	--	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	--	--	--	--	--	1,000	1,000
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)																										
Acenaphthene	--	--	--	--	--	<0.10	<0.10	<0.10	**0.1**	<0.10	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	1,000	1,000
Acenaphthylene	--	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	600	10
Anthracene	--	--	--	--	--	<0.10	<0.10	**0.2**	**0.4**	<0.10	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	1,000	1,000
Benzo(a)anthracene	--	--	--	--	--	<0.10	<0.10	**0.3**	**0.8**	**0.2**	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	7	7
Benzo(a)pyrene	--	--	--	--	--	<0.26	<0.25	<0.26	**0.8**	<0.26	<0.26	<0.25	<0.28	--	--	--	--	--	--	<0.29	<0.26	<0.26	<0.26	<0.27	2	2
Benzo(b)fluoranthene	--	--	--	--	--	<0.10	<0.10	**0.2**	**0.7**	**0.1**	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	7	7
Benzo(g,h,i)perylene	--	--	--	--	--	<0.10	<0.10	**0.1**	**0.5**	<0.10	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	1,000	1,000
Benzo(k)fluoranthene	--	--	--	--	--	<0.10	<0.10	**0.2**	**0.7**	**0.1**	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	70	70
Chrysene	--	--	--	--	--	<0.10	<0.10	**0.2**	**0.7**	**0.1**	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	70	70
Dibenz(a,h)anthracene	--	--	--	--	--	<0.10	<0.10	<0.10	**0.1**	<0.10	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	0.7	0.7
Fluoranthene	--	--	--	--	--	<0.10	**0.1**	**0.7**	**1.9**	**0.4**	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	1,000	1,000
Fluorene	--	--	--	--	--	<0.10	<0.10	<0.10	**0.1**	<0.10	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	1,000	1,000
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	<0.26	<0.25	<0.26	**0.5**	<0.26	<0.26	<0.25	<0.28	--	--	--	--	--	--	<0.29	<0.26	<0.26	<0.26	<0.27	7	7
Naphthalene	--	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	20	500
Phenanthrene	--	--	--	--	--	<0.10	<0.10	**0.7**	**1.3**	**0.3**	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	500	500
Pyrene	--	--	--	--	--	<0.10	**0.1**	**0.6**	**1.7**	**0.3**	<0.10	<0.10	<0.11	--	--	--	--	--	--	<0.12	<0.11	<0.11	<0.10	<0.11	1,000	1,000
METALS (mg/kg)																										
Lead	**16.1**	**28.3**	**2.6**	**11.4**	**12.8**	**2.9**	**17.3**	**3.3**	**15.8**	**4.8**	**4.7**	**2.7**	**2.6**	**11.8**	**14.6**	**15.3**	**12.1**	**13.0**	**13.3**	**3.4**	**3.2**	**3.9**	**3.1**	**7.4**	200	200

NOTES:

-- is analysis not performed
mg/kg is milligram per kilogram.
NE is not established
ND is not detected

MCP is Massachusetts Contingency Plan.
<2.0 indicates not detected at or above the laboratory reporting limit of 2.0 mg/kg
Analytes detected above the method reporting limit are in **Bold**
Analytes detected above MCP Method 1 Soil Standards are in **Red**.

EnviroTrac
Environmental Services

TABLE 1
SUMMARY OF SOIL DATA

Commercial Property
343-351 Summer Street
Somerville, Massachusetts

Sample Date	July 17, 2017				July 20, 2017	August 1, 2017					August 2, 2017		August 7, 2017	August 8, 2017	August 10, 2017	August 11, 2017	August 14, 2017			August 15, 2017	MCP Method 1 Soil Standards (mg/kg)	
Sample ID	S-23	S-24	S-25	S-26	S-27	S-28	S-30	S-32	S-34	S-36	S-37	S-38	S-46	S-47	S-48	S-49	S-50	S-51	S-52	S-53	S-1	
Depth (feet)	5	5	5	5	8	5	5	5	11	11	11	5	5-6	11-12	12	5	12	12	12	12-13		
PID (ppmv)	BDL	BDL	BDL	BDL	1.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	GW-2	GW-3
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)																						
C5- C8 Aliphatics	<7.5	<11	<14	<9.3	<6.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
C9- C12 Aliphatics	<7.5	<11	<14	<9.3	<6.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1000
C9- C10 Aromatics	<7.5	<11	<14	<9.3	<6.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
Benzene	<0.38	<0.55	<0.70	<0.46	<0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	40
Ethylbenzene	<0.38	<0.55	<0.70	<0.46	<0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
Methyl Tert Butyl Ether	<0.075	<0.11	<0.14	<0.093	<0.064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
Naphthalene	<0.38	<0.55	<0.70	<0.46	<0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	500
Toluene	<0.38	<0.55	<0.70	<0.46	<0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
m,p-Xylene	<0.38	<0.55	<0.70	<0.46	<0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
o-Xylene	<0.38	<0.55	<0.70	<0.46	<0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
Total Xylenes	<0.76	<1.10	<1.40	<0.92	<0.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)																						
C9-C18 Aliphatics	<9.6	<14	<16	<13	<9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
C19-C36 Aliphatics	<19	<28	<32	<25	<19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3,000	3,000
C11-C22 Aromatics	<19	<28	**37.1**	<25	<19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Acenaphthene	<0.48	<0.71	<0.79	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Acenaphthylene	<0.48	<0.71	<0.79	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	600	10
Anthracene	<0.48	<0.71	<0.79	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Benzo(a)anthracene	<0.48	<0.71	**1.30**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7
Benzo(a)pyrene	<0.48	<0.71	**1.41**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	2
Benzo(b)fluoranthene	<0.48	<0.71	**1.21**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7
Benzo(g,h,i)perylene	<0.48	<0.71	**1.90**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Benzo(k)fluoranthene	<0.48	<0.71	**1.21**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	70
Chrysene	<0.48	<0.71	**1.62**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	70
Dibenz(a,h)anthracene	<0.48	<0.71	<0.79	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.7	0.7
Fluoranthene	<0.48	<0.71	**3.04**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Fluorene	<0.48	<0.71	<0.79	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Indeno(1,2,3-cd)pyrene	<0.48	<0.71	**1.0**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7
2-Methylnaphthalene	<0.48	<0.71	<0.79	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	80	300
Naphthalene	<0.48	<0.71	<0.79	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	500
Phenanthrene	<0.48	<0.71	**1.98**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
Pyrene	<0.48	<0.71	**2.22**	<0.63	<0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)																						
Acenaphthene	--	--	--	--	--	<0.013	<0.012	**0.14**	<0.015	<0.014	<0.015	<0.013	<0.013	<0.014	<0.014	<0.013	<0.013	<0.013	<0.015	<0.041	1,000	1,000
Acenaphthylene	--	--	--	--	--	<0.019	<0.018	**0.23**	<0.022	<0.021	<0.022	<0.019	<0.020	<0.021	<0.021	**0.1**	<0.019	<0.019	<0.021	<0.041	600	10
Anthracene	--	--	--	--	--	**0.02**	**0.03**	**0.70**	<0.027	<0.025	<0.026	<0.023	<0.024	<0.026	<0.025	**0.1**	<0.024	<0.023	<0.026	<0.041	1,000	1,000
Benzo(a)anthracene	--	--	--	--	--	**0.07**	**0.17**	**1.82**	<0.012	<0.012	<0.012	**0.03**	<0.011	<0.012	<0.012	**1.2**	<0.011	<0.011	**0.03**	<0.041	7	7
Benzo(a)pyrene	--	--	--	--	--	**0.06**	**0.19**	**1.60**	<0.020	<0.019	<0.019	**0.03**	<0.017	<0.019	<0.019	**1.3**	<0.017	<0.017	**0.02**	<0.041	2	2
Benzo(b)fluoranthene	--	--	--	--	--	**0.07**	**0.24**	**1.73**	<0.019	<0.018	<0.019	**0.03**	<0.017	<0.019	<0.018	**1.4**	<0.017	<0.017	**0.02**	<0.041	7	7
Benzo(g,h,i)perylene	--	--	--	--	--	**0.03**	**0.12**	**0.81**	<0.022	<0.021	<0.021	<0.019	<0.019	<0.021	<0.021	**0.8**	<0.019	<0.019	<0.021	<0.041	1,000	1,000
Benzo(k)fluoranthene	--	--	--	--	--	**0.03**	**0.07**	**0.63**	<0.021	<0.019	<0.020	<0.017	<0.018	<0.020	<0.019	**0.6**	<0.018	<0.018	<0.020	<0.041	70	70
Chrysene	--	--	--	--	--	**0.06**	**0.16**	**1.72**	<0.014	<0.013	<0.013	**0.03**	<0.012	<0.013	<0.013	**1.2**	<0.012	<0.012	**0.03**	<0.041	70	70
Dibenz(a,h)anthracene	--	--	--	--	--	<0.017	**0.03**	**0.26**	<0.019	<0.018	<0.019	<0.017	<0.017	<0.019	<0.018	**0.2**	<0.017	<0.017	<0.019	<0.041	0.7	0.7
Fluoranthene	--	--	--	--	--	**0.12**	**0.25**	**3.67**	<0.020	<0.018	<0.019	**0.04**	<0.017	<0.019	<0.019	**1.3**	<0.017	<0.017	**0.02**	<0.041	1,000	1,000
Fluorene	--	--	--	--	--	<0.017	<0.016	**0.13**	<0.020	<0.019	<0.019	<0.017	<0.018	<0.019	<0.019	<0.017	<0.018	<0.017	<0.019	<0.041	1,000	1,000
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	**0.03**	**0.13**	**0.97**	<0.021	<0.019	<0.020	**0.02**	<0.018	<0.020	<0.019	**0.9**	<0.018	<0.018	<0.020	<0.041	7	7
Naphthalene	--	--	--	--	--	<0.011	<0.0099	**0.05**	<0.012	<0.012	<0.012	<0.011	<0.011	<0.012	<0.012	**0.03**	<0.011	<0.011	<0.012	<0.041	20	500
Phenanthrene	--	--	--	--	--	**0.09**	**0.12**	**2.67**	<0.015	<0.014	<0.014	<0.013	<0.013	<0.014	<0.014	**0.3**	<0.013	<0.013	<0.014	<0.041	500	500
Pyrene	--	--	--	--	--	**0.12**	**0.27**	**3.68**	<0.014	<0.013	<0.014	**0.04**	<0.012	<0.013	<0.013	**1.9**	<0.012	<0.012	**0.04**	<0.041	1,000	1,000
METALS (mg/kg)																						
Lead	--	--	--	--	--	**4.3**	**58.1**	**97.7**	**14.6**	**9.1**	**2.2**	**15.9**	**7.0**	**13.7**	**12.2**	**12.5**	**6.9**	**15.6**	**10.3**	**10.6**	200	200

NOTES:

-- is analysis not performed
mg/kg is milligram per kilogram.
NE is not established
ND is not detected

MCP is Massachusetts Contingency Plan.
<2.0 indicates not detected at or above the laboratory reporting limit of 2.0 mg/kg
Analytes detected above the method reporting limit are in **Bold**
Analytes detected above MCP Method 1 Soil Standards are in Red.

EnviroTrac
Environmental Services

TABLE 1
SUMMARY OF SOIL DATA

Commercial Property
343-351 Summer Street
Somerville, Massachusetts

Sample Date	August 17, 2017			August 18, 2017		August 21, 2017				August 22, 2017			August 24, 2017		August 28, 2017			MCP Method 1 Soil Standards (mg/kg)	
Sample ID	S-54	S-55	S-56	S-57	S-58	S-59	S-60	S-61	S-62	S-63	S-64	S-65	S-66	S-67	S-68	S-70	S-71		
Depth (feet)	5	5	5	12	12	10	12-13	12-13	12-13	12-13	12-13	12-13	12-13	12-13	5	5	12	S-1	
PID (ppmv)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	GW-2	GW-3
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)																			
C5- C8 Aliphatics	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
C9- C12 Aliphatics	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1000
C9- C10 Aromatics	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	40
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
Methyl Tert Butyl Ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	500
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
m,p-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
Total Xylenes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)																			
C9-C18 Aliphatics	--	--	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
C19-C36 Aliphatics	--	--	--	--	--	<26	--	--	--	--	--	--	--	--	--	--	--	3,000	3,000
C11-C22 Aromatics	--	--	--	--	--	<26	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Acenaphthene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Acenaphthylene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	600	10
Anthracene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Benzo(a)anthracene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	7	7
Benzo(a)pyrene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	2	2
Benzo(b)fluoranthene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	7	7
Benzo(g,h,i)perylene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Benzo(k)fluoranthene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	70	70
Chrysene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	70	70
Dibenz(a,h)anthracene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	0.7	0.7
Fluoranthene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Fluorene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	7	7
2-Methylnaphthalene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	80	300
Naphthalene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	20	500
Phenanthrene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	500	500
Pyrene	--	--	--	--	--	<0.66	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)																			
Acenaphthene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.1**	**0.1**	<0.041	1,000	1,000
Acenaphthylene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.1**	**0.2**	<0.041	600	10
Anthracene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.3**	**0.7**	<0.041	1,000	1,000
Benzo(a)anthracene	<0.041	**0.05**	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.9**	**2.1**	<0.041	7	7
Benzo(a)pyrene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.9**	1.9	<0.041	2	2
Benzo(b)fluoranthene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**1.1**	**2.3**	<0.041	7	7
Benzo(g,h,i)perylene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.6**	**1.1**	<0.041	1,000	1,000
Benzo(k)fluoranthene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.4**	**0.8**	<0.041	70	70
Chrysene	<0.041	**0.06**	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.9**	**2.1**	<0.041	70	70
Dibenz(a,h)anthracene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.2**	**0.3**	<0.041	0.7	0.7
Fluoranthene	**0.07**	**0.05**	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**1.6**	**3.5**	<0.041	1,000	1,000
Fluorene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.1**	**0.2**	<0.041	1,000	1,000
Indeno(1,2,3-cd)pyrene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.7**	**1.3**	<0.041	7	7
Naphthalene	<0.041	<0.046	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**0.04**	**0.1**	<0.041	20	500
Phenanthrene	<0.041	**0.05**	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**1.2**	**2.0**	<0.041	500	500
Pyrene	**0.06**	**0.09**	<0.045	<0.043	<0.041	<0.049	<0.042	<0.042	<0.041	<0.046	<0.043	<0.044	<0.043	<0.041	**1.7**	**3.8**	<0.041	1,000	1,000
METALS (mg/kg)																			
Lead	**211**	**83.2**	**11.9**	**14.9**	**12.8**	**642**	**11.8**	**13.9**	**14.6**	**13.3**	**13.7**	**12.1**	**17.6**	**12**	**175**	**33**	**11.9**	200	200

NOTES:

-- is analysis not performed
mg/kg is milligram per kilogram.
NE is not established.
ND is not detected

MCP is Massachusetts Contingency Plan.
<2.0 indicates not detected at or above the laboratory reporting limit of 2.0 mg/kg.
Analytes detected above the method reporting limit are in **Bold**
Analytes detected above MCP Method 1 Soil Standards are in **Red**

EnviroTrac
Environmental Services

TABLE 1
SUMMARY OF SOIL DATA

Commercial Property
343-351 Summer Street
Somerville, Massachusetts

Sample Date	August 30, 2017	August 31, 2017		September 15, 2017									September 21, 2017				January 29, 2018	January 31, 2018			MCP Method 1 Soil Standards (mg/kg)	
Sample ID	S-73	S-74	S-75	B-201		B-202		B-203		B-204	B-207		B-205		B-206		S-76	S-77	S-78	S-79		
Depth (feet)	12-13	12-13	15	0-2	7-8	0-1	7-8	1-2	7-8	7-8	0-2	7-8	2-3	7-8	2-3	7-8	--	4	4	4	S-1	
PID (ppmv)	BDL	BDL	BDL	BDL	BDL	1.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	GW-2	GW-3
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)																						
C5- C8 Aliphatics	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
C9- C12 Aliphatics	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,000	1000
C9- C10 Aromatics	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	40
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
Methyl Tert Butyl Ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	500
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
m,p-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
Total Xylenes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	500	500
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)																						
C9-C18 Aliphatics	--	--	--	**11**	<10	<11	<12	<55	<12	<12	**44**	**27**	**11**	<12	<11	<11	--	--	--	--	1,000	1,000
C19-C36 Aliphatics	--	--	--	**44**	<10	**21**	<12	**400**	**16**	<12	**21**	**19**	**46**	**13**	**16**	<11	--	--	--	--	3,000	3,000
C11-C22 Aromatics	--	--	--	**48**	<10	**30**	<12	**360**	<12	<12	**45**	**17**	**36**	**33**	**67**	<11	--	--	--	--	1,000	1,000
Acenaphthene	--	--	--	**0.28**	<0.10	<0.11	<0.12	**1.5**	<0.12	<0.12	<0.11	<0.11	<0.11	**0.2**	**0.3**	<0.11	--	--	--	--	1,000	1,000
Acenaphthylene	--	--	--	<0.11	<0.10	<0.11	<0.12	<0.55	<0.12	<0.12	<0.11	<0.11	<0.11	<0.12	**0.2**	<0.11	--	--	--	--	600	10
Anthracene	--	--	--	**0.9**	<0.10	**0.2**	<0.12	**3.0**	<0.12	<0.12	**0.3**	<0.11	**0.3**	**0.5**	**0.9**	<0.11	--	--	--	--	1,000	1,000
Benzo(a)anthracene	--	--	--	**1.1**	<0.10	**0.5**	<0.12	**8.9**	<0.12	<0.12	**0.5**	<0.11	**0.4**	**1.1**	**2.6**	<0.11	--	--	--	--	7	7
Benzo(a)pyrene	--	--	--	**1.1**	<0.10	**0.5**	<0.12	**8.3**	<0.12	<0.12	**0.6**	<0.11	**0.4**	**1.0**	**2.3**	<0.11	--	--	--	--	2	2
Benzo(b)fluoranthene	--	--	--	**1.5**	<0.10	**0.8**	<0.12	**14.0**	<0.12	<0.12	**0.8**	<0.11	**0.6**	**1.3**	**3.0**	<0.11	--	--	--	--	7	7
Benzo(g,h,i)perylene	--	--	--	**0.5**	<0.10	**0.4**	<0.12	**6.3**	<0.12	<0.12	**0.4**	<0.11	**0.2**	**0.5**	**1.3**	<0.11	--	--	--	--	1,000	1,000
Benzo(k)fluoranthene	--	--	--	**0.5**	<0.10	**0.3**	<0.12	**4.6**	<0.12	<0.12	**0.3**	<0.11	**0.2**	**0.5**	**1.2**	<0.11	--	--	--	--	70	70
Chrysene	--	--	--	**1.2**	<0.10	**0.6**	<0.12	**11.0**	<0.12	<0.12	**0.6**	<0.11	**0.4**	**1.2**	**2.8**	<0.11	--	--	--	--	70	70
Dibenz(a,h)anthracene	--	--	--	**0.2**	<0.10	<0.11	<0.12	**1.5**	<0.12	<0.12	<0.11	<0.11	<0.11	**0.2**	**0.4**	<0.11	--	--	--	--	0.7	0.7
Fluoranthene	--	--	--	**3.3**	<0.10	**1.4**	<0.12	**28.0**	<0.12	<0.12	**1.5**	<0.11	**1.0**	**2.6**	**5.6**	<0.11	--	--	--	--	1,000	1,000
Fluorene	--	--	--	**0.5**	<0.10	**0.1**	<0.12	**1.7**	<0.12	<0.12	<0.11	<0.11	**0.1**	**0.2**	**0.4**	<0.11	--	--	--	--	1,000	1,000
Indeno(1,2,3-cd)pyrene	--	--	--	**0.6**	<0.10	**0.3**	<0.12	**6.6**	<0.12	<0.12	**0.3**	<0.11	**0.3**	**0.6**	**1.5**	<0.11	--	--	--	--	7	7
2-Methylnaphthalene	--	--	--	**0.2**	<0.10	<0.11	<0.12	<0.55	<0.12	<0.12	<0.11	<0.11	<0.11	<0.12	<0.11	<0.11	--	--	--	--*	80	300
Naphthalene	--	--	--	**0.3**	<0.10	<0.11	<0.12	**2.0**	<0.12	<0.12	<0.11	<0.11	<0.11	<0.12	<0.11	<0.11	--	--	--	--	20	500
Phenanthrene	--	--	--	**3.4**	<0.10	**1.1**	<0.12	**20.0**	<0.12	<0.12	**1.2**	<0.11	**0.8**	**1.7**	**3.2**	<0.11	--	--	--	--	500	500
Pyrene	--	--	--	**2.8**	<0.10	**1.2**	<0.12	**26.0**	<0.12	<0.12	**1.4**	<0.11	**1.0**	**2.3**	**5.3**	<0.11	--	--	--	--	1,000	1,000
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)																						
Acenaphthene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	1,000	1,000
Acenaphthylene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	600	10
Anthracene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	1,000	1,000
Benzo(a)anthracene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	7	7
Benzo(a)pyrene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	2	2
Benzo(b)fluoranthene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	7	7
Benzo(g,h,i)perylene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	1,000	1,000
Benzo(k)fluoranthene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	70	70
Chrysene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	70	70
Dibenz(a,h)anthracene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	0.7	0.7
Fluoranthene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	1,000	1,000
Fluorene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	1,000	1,000
Indeno(1,2,3-cd)pyrene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	7	7
Naphthalene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	20	500
Phenanthrene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	500	500
Pyrene	<0.042	<0.045	<0.043	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.22	<0.20	<0.19	<0.18	1,000	1,000
METALS (mg/kg)																						
Lead	2.5	10.4	4.8	33	4.1	46	3.3	**830**	13	13	52	3.5	50	86	**210**	2.4	12	6.2	5.2	1.7	200	200

NOTES:

-- is analysis not performed
mg/kg is milligram per kilogram.
NE is not established
ND is not detected

MCP is Massachusetts Contingency Plan.
<2.0 indicates not detected at or above the laboratory reporting limit of 2.0 mg/kg
Analytes detected above the method reporting limit are in **Bold**
Analytes detected above MCP Method 1 Soil Standards are in Red.

EnviroTrac Environmental Services

TABLE 2
SUMMARY OF DUST AND AMBIENT AIR MONITORING DATA

Commercial Property
343-349 and 351 Summer Street
Somerville, Massachusetts

Date	Monitoring Interval	Elasped Time (minutes)	Location	Average PM-10 Concentration ($\mu g/m^3$)	Average Site PM-10 Concentration ($\mu g/m^3$)	Ambient Air (ppmv)
1/25/2018	9:17 AM to 11:18 AM	121	Up	-1	8	
	9:12 AM to 11.16 AM	124	Down	7		BDL
	9 14 AM to 11:16 AM	122	Stationary	8	--	
	11:18 AM to 12:10 PM	52	Up	-1	11	
	11:17 AM to 12:03 PM	46	Down	10		BDL
	11:16 AM to 12:16 PM	60	Stationary	5	--	
1/29/2018	7 26 AM to 10:33 AM	187	Up	3	14	
	7 42 AM to 10:36 AM	174	Down	17		BDL
	7:31 AM to 10:34 AM	183	Stationary	12	--	
	10:34 AM to 12:37 PM	123	Up	0	17	
	10.36 AM to 12:39 PM	123	Down	17		BDL
	10:34 AM to 12:36 PM	122	Stationary	6	--	
	12:37 PM to 2:40 PM	123	Up	1	15	
	12:39 PM to 2:43 PM	124	Down	16		BDL
	12:37 PM to 2:40 PM	123	Stationary	8	--	
	2:41 PM to 3:36 PM	55	Up	1	11	
	2:44 PM to 3:44 PM	60	Down	12		BDL
	2:41 PM to 3:41 PM	60	Stationary	7	--	
1/31/2018	9:37 AM to 11.44 AM	127	Up	8	-5	
	9:33 AM to 11.27 AM	114	Down	3		BDL
	9:31 AM to 11:26 AM	115	Stationary	15	--	
	11 44 AM to 1.41 PM	117	Up	7	-7	
	11:28 AM to 1:26 PM	118	Down	0		BDL
	11:27 AM to 1:25 PM	118	Stationary	4	--	
	1.42 PM to 3:29 PM	107	Up	7	-7	
	1:26 PM to 3:26 PM	120	Down	0		BDL
	1:25 PM to 3:21 PM	116	Stationary	4	--	
2/1/2018	7:47 AM to 9:49 AM	122	Up	13	5	
	7:38 AM to 9:41 AM	123	Down	18		BDL
	7:28 AM to 9:40 AM	132	Stationary	0	--	
	9:50 AM to 11:45 AM	115	Up	14	3	
	9:42 AM to 11.45 AM	123	Down	17		BDL
	9:41 AM to 11:44 AM	123	Stationary	0	--	
	11:46 AM to 1:42 PM	116	Up	13	7	
	11.45 AM to 1:41 PM	116	Down	20		BDL
	11:44 AM to 1:39 AM	115	Stationary	0	--	
	1:43 PM to 3:35 PM	112	Up	10	8	
	1:42 PM to 3:32 PM	110	Down	18		BDL
	1:40 PM to 3:28 AM	108	Stationary	0	--	
2/5/2018	7:40 AM to 9:39 AM	119	Up	7	-4	
	7:35 AM to 9:38 AM	123	Down	3		BDL
	7:33 AM to 9:37 AM	124	Stationary	8	--	
	9:41 AM to 11:44 AM	123	Up	5	-2	
	9:38 AM to 11.41 AM	123	Down	3		BDL
	9:37 AM to 11.40 AM	123	Stationary	6	--	
	11.44 AM to 2:01 PM	137	Up	5	-2	
	11.42 AM to 1:50 PM	128	Down	3		BDL
	11 40 AM to 1:48 PM	128	Stationary	7	--	
	2:01 PM to 3:01 PM	60	Up	16	-13	
	1.50 PM to 2:46 PM	56	Down	3		BDL
	1.48 PM to 2:40 PM	52	Stationary	6	--	

NOTES:

-- is not applicable or not measured

$\mu g/m^3$ is micrograms per cubic meter.

PID is photoionization detector

ppmv is parts per million by volume.

BDL is below the PID instrument detection limit of 0 5 ppmv

PM-10 refers to dust or soil particles having a diameter of 10 microns or less.

Ambient air was measured with a PID at the end of each monitoring interval in the vicinity of excavation areas.

Average PM-10 concentration for all monitoring locations were recorded at the end of each monitoring interval.

Average Site PM-10 concentration is calculated by subtracting the downwind reading from the upwind (background) reading.

The prevailing wind direction was checked daily from the National Weather Service to determine up and down wind locations.

The stationary unit was located at the northeastern corner of the 343-349 parcel.

All dust monitors were TSI DUSTTRAK II Desktop 8530 Dust/Aerosol Monitors.

The action level of 150 $\mu g/m^3$ was selected for the average Site PM-10 reading based on Site soil data and methodology outlined in "Real-Time Air Monitoring at Construction and Remediation Sites to Estimate Risks of Contaminated Dust Migration" (Weidner, Fitzgerald, and Vallatini 1997).

EnviroTrac
Environmental Services

TABLE 3
SUMMARY OF GROUNDWATER DATA

Maggiore Somerville
343-351 Summer Street
Somerville, Massachusetts

Monitoring Well ID	MW-1		MW-2		MW-3		MW-103		MW-105		MW-106		MW-107		MW-108		B-2/MW		B-3/MW		MCP Method 1 Groundwater Standards (µg/L)	
Depth to Groundwater (feet)	14.30		12.60		16.58		16.81		11.31		10.41		13.17		19.5		12.22		11.97			
Screen Interval BGS (feet)	9-19		9-19		9-19		10-20		10-20		8-18		10-20		10-20		Unknown		Unknown			
Depth of Well (feet)	22		22		22		20		20		18		20		20		15		15			
Sample Date	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	GW-2	GW-3
VOLATILE ORGANIC COMPOUNDS by 8260 (µg/L)																						
Acetone	<10	--	<10	--	<10	--	**14.5**	--	<10	--	<10	--	<10	--	--	--	<10	--	<10	--	50,000	50,000
Benzene	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	--	--	<0.50	--	<0.50	--	1,000	10,000
Bromobenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Bromochloromethane	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Bromodichloromethane	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	6	50,000
Bromoform	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	700	50,000
Bromomethane	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	7	800
2-Butanone (MEK)	<10	--	<10	--	<10	--	<10	--	<10	--	<10	--	<10	--	--	--	<10	--	<10	--	50,000	50,000
n-Butylbenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
sec-Butylbenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
tert-Butylbenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Carbon disulfide	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Carbon tetrachloride	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	2	5,000
Chlorobenzene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	200	1,000
Chloroethane	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	NE	NE
Chloroform	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	50	20,000
Chloromethane	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	NE	NE
o-Chlorotoluene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
p-Chlorotoluene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Di-Isopropyl ether	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	NE	NE
1,2-Dibromo-3-chloropropane	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Dibromochloromethane	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	20	50,000
1,2-Dibromoethane	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	2	50,000
1,2-Dichlorobenzene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	8,000	2,000
1,3-Dichlorobenzene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	6,000	50,000
1,4-Dichlorobenzene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	60	8,000
Dichlorodifluoromethane	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	NE	NE
1,1-Dichloroethane	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	2,000	20,000
1,2-Dichloroethane	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	5	20,000
1,1-Dichloroethene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	80	30,000
cis-1,2-Dichloroethene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	20	50,000
trans-1,2-Dichloroethene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	80	50,000
1,2-Dichloropropane	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	3	50,000
1,3-Dichloropropane	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
2,2-Dichloropropane	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
1,1-Dichloropropene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
cis-1,3-Dichloropropene	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	--	--	<0.50	--	<0.50	--	NE	NE
trans-1,3-Dichloropropene	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	--	--	<0.50	--	<0.50	--	NE	NE

NOTES:

-- is not applicable or not analyzed.
µg/L is micrograms per liter.
NE is not established.
BGS is below ground surface.
MTBE is methyl tert butyl ether.
<2.0 is not detected at or above the laboratory reporting limit of 2.0 µg/L.
Analytes detected above the method reporting limit are in **Bold.**
Analytes detected above applicable MCP groundwater standards are in **Red.**

EnviroTrac
Environmental Services

TABLE 3
SUMMARY OF GROUNDWATER DATA

Maggiore Somerville
343-351 Summer Street
Somerville, Massachusetts

Monitoring Well ID	MW-1		MW-2		MW-3		MW-103		MW-105		MW-106		MW-107		MW-108		B-2/MW		B-3/MW		MCP Method 1 Groundwater Standards (µg/L)	
Depth to Groundwater (feet)	14.30		12.60		16.58		16.81		11.31		10.41		13.17		19.5		12.22		11.97			
Screen Interval BGS (feet)	9-19		9-19		9-19		10-20		10-20		8-18		10-20		10-20		Unknown		Unknown			
Depth of Well (feet)	22		22		22		20		20		18		20		20		15		15			
Sample Date	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	GW-2	GW-3
1,4-Dioxane	<25	--	<25	--	<25	--	<25	--	<25	--	<25	--	<25	--	--	--	<25	--	<25	--	6,000	50,000
Ethyl Ether	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Ethylbenzene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	20,000	5,000
Hexachlorobutadiene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	50	3,000
2-Hexanone	<10	--	<10	--	<10	--	<10	--	<10	--	<10	--	<10	--	--	--	<10	--	<10	--	NE	NE
Isopropylbenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
p-Isopropyltoluene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Methyl Tert Butyl Ether	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	50,000	50,000
4-Methyl-2-pentanone (MIBK)	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	50,000	50,000
Methylene bromide	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Methylene chloride	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	2,000	50,000
Naphthalene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	700	20,000
n-Propylbenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Styrene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	100	6,000
tert-Amyl Methyl Ether	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	NE	NE
tert-Butyl Ethyl Ether	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	NE	NE
1,1,1,2-Tetrachloroethane	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	10	50,000
1,1,2,2-Tetrachloroethane	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	<0.50	--	--	--	<0.50	--	<0.50	--	9	50,000
Tetrachloroethene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	50	30,000
Tetrahydrofuran	<10	--	<10	--	<10	--	<10	--	<10	--	<10	--	<10	--	--	--	<10	--	<10	--	NE	NE
Toluene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	50,000	40,000
1,2,3-Trichlorobenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
1,2,4-Trichlorobenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	200	50,000
1,1,1-Trichloroethane	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	4,000	20,000
1,1,2-Trichloroethane	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	900	50,000
Trichloroethene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	5	5,000
Trichlorofluoromethane	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	NE	NE
1,2,3-Trichloropropane	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
1,2,4-Trimethylbenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
1,3,5-Trimethylbenzene	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	<5.0	--	--	--	<5.0	--	<5.0	--	NE	NE
Vinyl chloride	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	2	50,000
m,p-Xylene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	3,000	5,000
o-Xylene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	3,000	5,000
Xylene (total)	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	3,000	5,000

NOTES:

-- is not applicable or not analyzed.
µg/L is micrograms per liter.
NE is not established.
BGS is below ground surface.
MTBE is methyl tert butyl ether.
<2.0 is not detected at or above the laboratory reporting limit of 2.0 µg/L.
Analytes detected above the method reporting limit are in **Bold.**
Analytes detected above applicable MCP groundwater standards are in **Red.**

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Environmental Services

TABLE 3
SUMMARY OF GROUNDWATER DATA

Maggiore Somerville
343-351 Summer Street
Somerville, Massachusetts

Monitoring Well ID	MW-1		MW-2		MW-3		MW-103		MW-105		MW-106		MW-107		MW-108		B-2/MW		B-3/MW		MCP Method 1 Groundwater Standards (µg/L)	
Depth to Groundwater (feet)	14.30		12.60		16.58		16.81		11.31		10.41		13.17		19.5		12.22		11.97			
Screen Interval BGS (feet)	9-19		9-19		9-19		10-20		10-20		8-18		10-20		10-20		Unknown		Unknown			
Depth of Well (feet)	22		22		22		20		20		18		20		20		15		15			
Sample Date	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	8/17/16	3/31/17	GW-2	GW-3
VOLATILE PETROLEUM HYDROCARBONS (µg/L)																						
C5-C8 Aliphatics	<50	--	<50	--	<50	--	<50	--	<50	--	<50	--	<50	--	--	--	<50	--	<50	--	3,000	50,000
C9-C12 Aliphatics	<50	--	<50	--	<50	--	<50	--	<50	--	<50	--	<50	--	--	--	<50	--	<50	--	5,000	50,000
C9-C10 Aromatics	<50	--	<50	--	<50	--	<50	--	<50	--	<50	--	<50	--	--	--	<50	--	<50	--	4,000	50,000
Benzene	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	1,000	10,000
Ethylbenzene	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	20,000	5,000
MTBE	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	--	--	<1.0	--	<1.0	--	50,000	50,000
Naphthalene	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	<3.0	--	--	--	<3.0	--	<3.0	--	700	20,000
Toluene	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	<2.0	--	--	--	<2.0	--	<2.0	--	50,000	40,000
Xylenes (total)	<4.0	--	<4.0	--	<4.0	--	<4.0	--	<4.0	--	<4.0	--	<4.0	--	--	--	<4.0	--	<4.0	--	3,000	5,000
EXTRACTABLE PETROLEUM HYDROCARBONS (µg/L)																						
C9-C18 Aliphatics	<110	<110	<110	<110	<120	<110	<120	<110	<110	<110	<120	<110	<130	<110	<100	<110	<110	<110	<110	<110	5,000	50,000
C19-C36 Aliphatics	<110	<110	**362**	<110	<120	<110	<120	<110	<110	<110	<120	<110	<130	<110	<100	<110	<110	<110	<110	<110	NE	50,000
C11-C22 Aromatics	<110	<110	<110	<110	<120	<110	<120	<110	<110	<110	<120	<110	<130	<110	<100	<110	<110	<110	<110	<110	50,000	5,000
Acenaphthene	<5.5	<0.11	<5.6	<0.11	<5.9	<0.11	<6.1	<0.11	<5.6	<0.11	<5.8	<0.11	<6.3	**0.14**	<5.1	<0.11	<5.6	<0.11	<5.6	<0.11	NE	10,000
Acenaphthylene	<5.5	<0.11	<5.6	<0.11	<5.9	<0.11	<6.1	<0.11	<5.6	<0.11	<5.8	<0.11	<6.3	**0.14**	<5.1	<0.11	<5.6	<0.11	<5.6	<0.11	10,000	40
Anthracene	<5.5	<0.11	<5.6	<0.11	<5.9	<0.11	<6.1	<0.11	<5.6	<0.11	<5.8	<0.11	<6.3	**0.36**	<5.1	<0.11	<5.6	<0.11	<5.6	<0.11	NE	30
Benzo(a)anthracene	<5.5	<0.056	<5.6	**0.062**	<5.9	<0.057	<6.1	**0.24**	<5.6	<0.055	<5.8	<0.054	<6.3	**0.89**	<5.1	**0.06**	<5.6	<0.054	<5.6	<0.056	NE	1,000
Benzo(a)pyrene	<5.5	<0.11	<5.6	**0.11**	<5.9	<0.11	<6.1	**0.25**	<5.6	<0.11	<5.8	<0.11	<6.3	**0.88**	<5.1	**0.11**	<5.6	<0.11	<5.6	<0.11	NE	500
Benzo(b)fluoranthene	<5.5	<0.056	<5.6	**0.069**	<5.9	<0.057	<6.1	**0.27**	<5.6	<0.055	<5.8	<0.054	<6.3	**1.5**	<5.1	**0.055**	<5.6	<0.054	<5.6	<0.056	NE	400
Benzo(g,h,i)perylene	<5.5	<0.11	<5.6	<0.11	<5.9	<0.11	<6.1	**0.14**	<5.6	<0.11	<5.8	<0.11	<6.3	**0.72**	<5.1	<0.11	<5.6	<0.11	<5.6	<0.11	NE	20
Benzo(k)fluoranthene	<5.5	<0.11	<5.6	<0.11	<5.9	<0.11	<6.1	**0.13**	<5.6	<0.11	<5.8	<0.11	<6.3	**0.65**	<5.1	<0.11	<5.6	<0.11	<5.6	<0.11	NE	100
Chrysene	<5.5	<0.11	<5.6	<0.11	<5.9	<0.11	<6.1	**0.21**	<5.6	<0.11	<5.8	<0.11	<6.3	**1.1**	<5.1	<0.11	<5.6	<0.11	<5.6	<0.11	NE	70
Dibenz(a,h)anthracene	<5.5	<0.11	<5.6	<0.11	<5.9	<0.11	<6.1	<0.11	<5.6	<0.11	<5.8	<0.11	<6.3	**0.25**	<5.1	<0.11	<5.6	<0.11	<5.6	<0.11	NE	40
Fluoranthene	<5.5	<0.11	<5.6	**0.11**	<5.9	<0.11	<6.1	**0.51**	<5.6	<0.11	<5.8	<0.11	<6.3	**2.1**	<5.1	**0.11**	<5.6	<0.11	<5.6	<0.11	NE	200
Fluorene	<5.5	<0.11	<5.6	<0.11	<5.9	<0.11	<6.1	<0.11	<5.6	<0.11	<5.8	<0.11	<6.3	**0.17**	<5.1	<0.11	<5.6	<0.11	<5.6	<0.11	NE	40
Indeno(1,2,3-cd)pyrene	<5.5	<0.11	<5.6	**0.16**	<5.9	<0.11	<6.1	**0.27**	<5.6	<0.11	<5.8	<0.11	<6.3	**1**	<5.1	**0.14**	<5.6	<0.11	<5.6	<0.11	NE	100
2-Methylnaphthalene	<5.5	<0.22	<5.6	<0.22	<5.9	<0.23	<6.1	<0.22	<5.6	<0.22	<5.8	<0.22	<6.3	<0.22	<5.1	<0.22	<5.6	<0.22	<5.6	<0.22	2,000	20,000
Naphthalene	<5.5	**0.27**	<5.6	**0.26**	<5.9	**0.28**	<6.1	**0.46**	<5.6	**0.23**	<5.8	**0.26**	<6.3	**0.31**	<5.1	<0.22	<5.6	**0.28**	<5.6	**0.26**	700	20,000
Phenanthrene	<5.5	**0.056**	<5.6	**0.066**	<5.9	<0.057	<6.1	**0.3**	<5.6	**0.073**	<5.8	**0.10**	<6.3	**1.2**	<5.1	**0.072**	<5.6	<0.054	<5.6	<0.056	NE	10,000
Pyrene	<5.5	<0.11	<5.6	<0.11	<5.9	<0.11	<6.1	**0.42**	<5.6	<0.11	<5.8	<0.11	<6.3	**1.8**	<5.1	<0.11	<5.6	<0.11	<5.6	<0.11	NE	20
METALS (µg/L)																						
Antimony	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	--	<6.0	<6.0	<6.0	<6.0	<6.0	NE	8,000
Arsenic	**29.5**	**22.5**	**4.4**	**13.4**	<4.0	<3.0	**24.3**	<3.0	<4.0	<3.0	**6**	<3.0	<4.0	<3.0	--	<3.0	<4.0	<3.0	**5.7**	<3.0	NE	900
Barium	<50	<50	<50	<50	<50	<50	<50	<50	<50	**66.9**	<50	<50	<50	<50	--	<50	<50	<50	<50	<50	NE	50,000
Beryllium	<4.0	<1.0	<4.0	<1.0	<4.0	<1.0	<4.0	<1.0	<4.0	<1.0	<4.0	<1.0	<4.0	<1.0	--	<1.0	<4.0	<1.0	<4.0	<1.0	NE	200
Cadmium	<4.0	<3.0	<4.0	<3.0	<4.0	<3.0	<4.0	<3.0	<4.0	<3.0	<4.0	<3.0	<4.0	<3.0	--	<3.0	<4.0	<3.0	<4.0	<3.0	NE	4
Chromium	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	<10	<10	<10	<10	<10	NE	300
Lead	<5.0	<3.0	<5.0	<3.0	<5.0	<3.0	<5.0	<3.0	<5.0	**3.3**	<5.0	<3.0	<5.0	**8.5**	--	<3.0	<5.0	<3.0	<5.0	<3.0	NE	10
Mercury	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	<0.20	<0.20	<0.20	<0.20	<0.20	NE	20
Nickel	<40	<10	<40	<10	<40	<10	<40	<10	<40	<10	<40	<10	<40	<10	--	<10	<40	<10	<40	<10	NE	200
Selenium	<10	<10	<10	<10	<10	<10	<10	<10	**11.6**	**14.6**	<10	<10	**11.3**	**11.8**	--	<10	<10	**17.8**	<10	<10	NE	100
Silver	<5.0	<10	<5.0	<10	<5.0	<10	<5.0	<10	<5.0	<10	<5.0	<10	<5.0	<10	--	<10	<5.0	<10	<5.0	<10	NE	7
Thallium	<5.0	<2.0	<5.0	<2.0	<5.0	<2.0	<5.0	<2.0	<5.0	<2.0	<5.0	<2.0	<5.0	<2.0	--	<2.0	<5.0	<2.0	<5.0	<2.0	NE	3,000
Vanadium	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	<10	<10	<10	<10	<10	NE	4,000
Zinc	<20	<20	<20	<20	<20	<20	<20	<20	**26.1**	**293**	<20	<20	<20	<20	--	<20	<20	**26**	<20	<20	NE	900

NOTES:
-- is not applicable or not analyzed.
µg/L is micrograms per liter.
NE is not established.
BGS is below ground surface.

MTBE is methyl tert butyl ether.
<2.0 is not detected at or above the laboratory reporting limit of 2.0 µg/L.
Analytes detected above the method reporting limit are in **Bold.**
Analytes detected above applicable MCP groundwater standards are in Red.

EnviroTrac
Environmental Services

APPENDIX A

Technical Drilling Services, Inc.
P.O. Box 10 – 2 Peter Drive, Sterling, MA 01564 Tel. (978) 422-0005- Fax (978) 422-0006

WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	MW-107	19.85'	8.12'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	19.85'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 19.85' - 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 4

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Asphalt

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

Technical Drilling Services, Inc.
P.O. Box 10 – 2 Peter Drive, Sterling, MA 01564 Tel. (978) 422-0005- Fax (978) 422-0006

WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	MW-106	17.6'	5.93'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	17.6'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 17.6' - 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 4

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Asphalt

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

Technical Drilling Services. Inc.
P.O. Box 10 – 2 Peter Drive, Sterling, MA 01564 Tel. (978) 422-0005- Fax (978) 422-0006

WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	MW-105	19.75'	9.58'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	19.75'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 19.75' - 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 4

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Asphalt

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

Technical Drilling Services. Inc.
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WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	B-2/MW	14.6'	10/53'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	14.6'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 14.6' - 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 3

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Asphalt

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

Technical Drilling Services, Inc.
P.O. Box 10 – 2 Peter Drive, Sterling, MA 01564 Tel. (978) 422-0005- Fax (978) 422-0006

WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	B-3/MW	14.4'	9.7'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	14.4'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 14.4' - 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 3

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Topsoil

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

Technical Drilling Services, Inc.
P.O. Box 10 – 2 Peter Drive, Sterling, MA 01564 Tel. (978) 422-0005- Fax (978) 422-0006

WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	MW-3	22'	8.71'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	22'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 22'- 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 4.5

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Topsoil

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

Technical Drilling Services. Inc.
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WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	MW-103	23.2'	10.47'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	23.2'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 23.2' - 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 4.5

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Topsoil

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

Technical Drilling Services. Inc.
P.O. Box 10 – 2 Peter Drive, Sterling, MA 01564 Tel. (978) 422-0005- Fax (978) 422-0006

WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	MW-2	21.95'	9.88'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	21.95'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 21.95'- 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 4.5

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Topsoil

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

Technical Drilling Services, Inc.
P.O. Box 10 – 2 Peter Drive, Sterling, MA 01564 Tel. (978) 422-0005- Fax (978) 422-0006

WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	MW-1	22.05'	11.01'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	22.05'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 22.05' - 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 4.5

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Topsoil

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

Technical Drilling Services. Inc.
P.O. Box 10 – 2 Peter Drive, Sterling, MA 01564 Tel. (978) 422-0005- Fax (978) 422-0006

WELL ABANDONMENT REPORT

MA LICENSE #560

SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Maggiore	Envirotrac	4/19/17	MW-108	22.67'	12'
343-351 Summer Street	2 Merchant Street	**FINISH DATE**	**WELL TYPE**	**WELL DEPTH**	**HOLE TYPE**
Somerville, MA	Sharon, MA	4/19/17	Mont.	22.67'	2"

1. WELL ABANDONMENT METHOD:

X Abandon in place per DEP Guidelines

Overdrill, Pull & Grout per DEP Guidelines

2. DEPTH OF SEAL 22.67' - 6"

3. TYPE OF SEALING MATERIAL USED: Cement/Bentonite Grout

4. VOLUME OF SEALING MATERIAL USED:

Gallons: 4.5

Pounds:

Concrete Bags:

5. SURFACE CAPPING DEPTH: 6"

MATERIAL: Topsoil

was roadbox/protective casing removed? Yes X No

6. CHANGES MADE IN WELL DURING PLUGGING:

APPENDIX B

METHOD 1 RISK CHARACTERIZATION

343-351 Summer Street
Somerville, MA

February 14, 2018

Report prepared for:
EnviroTrac Ltd.
2 Merchant Street Suite 2,
Sharon, MA 02067

COLLABORATIVE RISK SOLUTIONS LLC
36 Fairview Avenue
Scituate, MA 02066

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METHOD 1 RISK CHARACTERIZATION

343-351 Summer Street
Somerville, MA

February 14, 2018

Report prepared for:
EnviroTrac Ltd.
2 Merchant Street Suite 2,
Sharon, MA 02067

COLLABORATIVE RISK SOLUTIONS LLC
36 Fairview Avenue
Scituate, MA 02066

Collaborative Risk Solutions LLC completed a characterization of risk to human health, safety, public welfare and the environment for the site located at 343 - 351 Summer Street, Somerville, Massachusetts (the "Site"). The risk characterization ("RC") was performed to support and is submitted as an attachment to a Permanent Solution Statement (PSS) prepared by EnviroTrac Ltd. (EnviroTrac). The RC has been performed in general accordance with procedures outlined in the Massachusetts Contingency Plan (MCP; 310 CMR 40.0900) and in a manner consistent with scientifically acceptable human health risk assessment practices established by the Massachusetts Department of Environmental Protection (MassDEP).

Under the MCP, a risk characterization (RC) is performed in accordance with one of three methods. Method 1 and Method 2 risk characterizations use promulgated MCP standards to characterize potential risks; a Method 3 risk characterization quantitatively assesses non-cancer and cancer risks, and can be used at any site. For this RC, a Method 1 risk characterization was prepared to evaluate the risk of harm to health, public welfare and the environment, based on analytical data and other information provided to Collaborative Risk Solutions LLC by EnviroTrac. A Method 1 RC was determined to be appropriate for the site, as contamination is limited to soil and groundwater, no bioaccumulative compounds are present in the shallowest two feet, odors from the release have not been observed, and Method 1 Standards exist for all constituents detected at the Site. In addition, as required by the MCP (310 CMR 40.0971(5)), a separate characterization of the risk of harm to safety was performed.

Risk Characterization Organization

The RC is organized as follows:

- ***Site Information*** summarizes the Site location and use, describes the extent of release, and identifies Contaminants of Concern.
- ***Method 1 Risk Characterization*** evaluates potential exposures and risks to human receptors. The Method 1 RC describes the current and possible future Site Activities and Uses, groundwater and soil categories, Exposure Points, Exposure Point Concentrations, and a comparison of Exposure Point Concentrations to MCP Method 1 Standards;
- ***Characterization of Risk of Harm to Safety*** evaluates the potential for threats of physical harm or bodily injury to people;
- ***Uncertainty Analysis*** identifies the uncertainty associated with the RC.

All components form the basis of the conclusions of the RC.

1.0 Site Information

Comprehensive Site information is provided by EnviroTrac in the PSS to which this is attached. Briefly, the Site is located on an approximately 0.93 acre plot of land comprised of two parcels (343-349 Summer Street and 351 Summer Street) in an area zoned for business and residential use. It is surrounded by properties zoned for residential and business use, which include residences located north and east of the Site, a Veterans of Foreign Wars (VFW) Post located west of the Site, and Summer Street located south of the Site. No surface water body is located on or in the vicinity of the Site. The closest surface water body is Fresh Pond, located 1.3 mile southwest of the Site.

The Site is currently undergoing redevelopment and is covered by a building under development, the foundation of a second building under development, and pavement. A small, unpaved area is located on the northern edge of the Site. Prior to redevelopment, the parcel at 343-349 Summer Street was undeveloped, with an air vent for the Massachusetts Bay Transportation Authority (MBTA) Red Line, which runs within a bedrock tunnel approximately 80 feet below ground surface (bgs). The parcel was historically the location of residences and parking. The 351 Summer Street parcel was historically a gasoline filling station and more recently a paved parking lot for the VFW Post #529.

Figures 2 and 4 of the PSS depicts the Site boundary and sampling locations.

1.1 Extent of Release

The extent of release is described in Section 1.2 of the PSS. Briefly, lead and benzo(a)pyrene were detected in soil above MCP Reportable Concentrations during due diligence assessments. Conditions identified during redevelopment include the presence of numerous underground storage tanks (USTs). Only one (1) UST was the source of a Release condition (UST-1) and was previously closed under a Permanent Solution for RTN 3-33735. Extractable petroleum hydrocarbons (EPH) were identified in soil, and Release Abatement Measure (RAM) activities involved the management of impacted soil for off-Site disposal. Residual concentrations of EPH remain in soil, and polycyclic aromatic hydrocarbons (PAHs), with the exception of 2-methylnaphthalene, have been reduced in concentration to background conditions at all locations. Metals remain in soil at varying concentrations across the Site.

1.2 Selection of Contaminants of Concern

This section summarizes the selection of contaminants of concern (COCs). COCs are those constituents detected at the Site that are carried through the quantitative risk characterization. MassDEP (1995) guidance provides the following reasons why an individual analyte may be eliminated from the quantitative risk characterization:

- The analyte s a field or laboratory contaminant
- The analyte is present at low frequency of detection and low concentration
- The analyte is present at "background" concentrations and is not related to Site activities

The MCP (310 CMR 40.0006) defines background as those levels of OHM that would exist in the absence of the disposal site of concern. Site soil concentrations were compared to MassDEP-identified soil background concentrations to identify COCs. No analyte was excluded as a COC based on presence as a field or laboratory contaminant. The selection of groundwater COCs

considered analyte frequency of detection and concentration. COC selection by medium is described below.

1.2.1 Soil

Data from 81 soil samples collected between August 2016 and January 2018 were used in the assessment of risk from EPH, PAHs, and lead in Site soil. Soil samples were collected from grade to 15 feet below ground surface (bgs). Soil sampling results are provided in Table 1 of the PSS. The quality and usability of the results of the 81 soil samples are evaluated by EnviroTrac in the Representativeness Evaluation and Data Usability Assessment (Section 7 of the PSS). EnviroTrac determined that soil results conservatively represent current Site conditions, and are usable for risk assessment purposes.

Historically, metals sampling was also conducted as part of investigation. Soil currently on-Site has been sampled for lead, but not for other metals. Therefore, the RC included historic metals sampling results reflecting soil that has been removed from the Site. Soil sampling results are summarized in Table 1. For the purposes of summary statistics, one-half of the detection limit was used as a surrogate concentration when only detected concentrations were used to calculate average concentrations, as historic detection limits were unavailable.

Metals were generally detected with the highest frequency. The C19-C36 aliphatics and C11-C22 aromatics were also detected in greater than thirty percent of samples. The frequency of detection and summary statistics for constituents detected in soil are shown in Table 1. Concentrations of soil constituents were compared to MassDEP background levels and summary statistics (MassDEP, 2002) as a criterion for selection as a COC. Constituents were first screened against the MassDEP point estimate background concentration for soil containing coal ash or wood ash associated with fill material (MassDEP, 2002). As shown in Table 1, the maximum concentrations of numerous PAHs and metals are lower than MassDEP background levels.

One location, S-9, was the only location on-Site with 2-methylnaphthalene detected above the MassDEP background point estimate. This sample was associated with RTN 3-33735, and was collected from the edge of the UST excavation. Because 2-methylnaphthalene is associated with petroleum, 2-methylnaphthalene was retained as a COC. Ten additional PAHs were detected above the MassDEP background point estimate. The maximum concentration of all of these PAHs and lead were detected at sample B-203 (1-2'). This sample was the only sample remaining on-Site with the ten PAHs detected above the MassDEP point estimate. This sample is located beneath a tree on the northern edge of the Site and is not in an area of the Site associated with historic operations. It is unlikely that the presence of PAHs and lead in this sample relate to Site releases, and all other remaining Site samples noted PAH concentrations below the background point estimate. One additional sample exceeded the MassDEP point estimate for lead background. Sample S-59 was collected at a depth of 10 feet in a different part of the Site from B-203, and had no detectable concentration of any other analyte.

MassDEP guidance (MassDEP, 2002) notes ranges of background concentrations of PAHs and metals in soil, and concedes that "the use of the [MassDEP point estimate] values listed in Table 1 will incorrectly require the assessment of some "true" background concentration of oil and hazardous material at the high end of the background range... In many cases, additional information about the location of the site, the nature of the soils or the known or suspected disposal practices may be used to justify the application of different literature values." (MassDEP, 2002). Due to the nature of the soils, which have coal, coal ash and bituminous pavement binder present in soil collected across the property, and the location of elevated concentrations in soil relative to each other and historic operations, a further background comparison was performed.

To further evaluate background conditions, PAHs and lead were compared to the data set used by MassDEP to select their point estimate background concentration (MassDEP, 2002). Specifically, 50th percentile, 90th percentile, and maximum background concentrations were compared to the corresponding Site concentration statistics. The statistical comparison is provided in Table 2. Site concentrations are lower than background concentrations for each analyte and statistic compared. Therefore, PAHs and lead were identified as consistent with background concentrations, and were eliminated as COCs for the RC.

Metals other than lead that were detected in soil above the MassDEP point estimate were retained as COCs. While some of these metals are consistent with background concentrations based on a statistical comparison, they were conservatively retained as COCs due to the uncertainties associated with concentrations of metals in remaining soil.

1.2.2 Groundwater

Groundwater samples were analyzed for volatile petroleum hydrocarbons (VPH), EPH, and metals. The RC considered two rounds of sampling results from ten on-Site wells. Groundwater sampling results are provided in Table 3 of the PSS and are summarized in Table 2. Acetone, C19-C36 aliphatics, PAHs, and metals have been detected in groundwater. MassDEP does not provide data related to groundwater background concentrations; therefore no comparison was completed and every analyte detected in groundwater was retained as a COC.

2.0 Method 1 Risk Characterization

The Method 1 RC was completed in accordance with the MCP (310 CMR 40.0973) and evaluates risk through documentation of Site use, classification of Site soil and groundwater categories, identification of Exposure Points, derivation of Exposure Point Concentrations, and comparison to MCP Method 1 Standards. Each of these elements is described below.

2.1 Site Activities, Uses, and Receptors

The Site is currently being redeveloped and will include two buildings. A three-story building which has been constructed will include condominiums for residential use. The two-story building currently under construction will house the VFW Post #529, currently located adjacent to the Site. The Site will be primarily paved, with small areas of landscaping.

Future activities and uses are therefore expected to be residential and commercial. No Activity and Use Limitation has been implemented at the Site, and therefore, future activities and uses could include commercial, industrial, institutional, residential or recreational uses. This RC assumes unrestricted future redevelopment and use.

Human receptors at the Site include adult construction workers in the near-term, and adult workers, adult and child residents, and visitors following redevelopment.

2.2 Soil and Groundwater Categories

This section identifies and documents the soil and groundwater categories applicable to the Site, as described in 310 CMR 40.0930. These soil and groundwater categories are considered to be general indicators of the potential for exposure to oil and hazardous material (OHM) at the Site, and are used to identify relevant Method 1 Standards.

2.2.1 Soil

The MCP specifies three soil categories (S-1, S-2, and S-3). Category S-1 soil represents the highest potential for exposure, and Category S-3 soil represents the lowest potential for exposure. The potential for exposure relies upon evaluation of receptor characteristics and the accessibility of soil.

Currently, the Site is undergoing redevelopment. It is an active construction Site, which is primarily paved or covered by a building or foundation. Current receptors include construction workers. Because excavation associated with the foundations has been completed and construction is mainly associated with structures and not excavation, current and near-term intensity of Site soil use is considered low, with the exception of potential underground utility work. Under current conditions, the following soil categories apply:

S-2: Soil between 0 and 3 feet in unpaved areas, as children are not present, and adults may be present at a high frequency and low intensity (construction workers) or a low frequency and high intensity (utility workers).

S-3: Unpaved soil greater than 3 feet in depth, and all soil covered by pavement, the three-story building, or the foundation of the two-story building, as children are not present, and adults may be present at a high frequency and low intensity or a low frequency and high intensity.

The property is being redeveloped, and portions of the property currently paved for construction are expected to be landscaped areas following construction. Under the redevelopment scenario,

soil presently at depths between 0 and 15 feet below grade may be brought to the surface. Therefore, under future, planned Site use, the following soil categories would apply:

S-1: Soil currently between 0 and 15 feet in areas identified as landscaped areas and paved areas, as children may be present at a high frequency and high intensity basis.

S-3: Soil at depths greater than 15 feet across the Site, and soil sequestered underneath the buildings under construction.

In the future, should the Site be redeveloped again and the buildings removed from the Site, and assuming unrestricted use, all Site soil currently located between 0 and 15 feet across the Site would be categorized as S-1.

2.2.2 Groundwater

The MassDEP has established three categories for groundwater, which relate to the types of groundwater exposures:

- GW-1 applies to groundwater assumed to be a potential source of drinking water;
- GW-2 applies to groundwater considered to be a potential source of vapors that could migrate into building air; and,
- GW-3 applies to groundwater that is assumed to discharge to surface water.

As described by EnviroTrac in Section 1.4 of the PSS, groundwater is not classified as GW-1 because the Site is not located within potential drinking water resource area. Currently, groundwater at the Site located within 30 feet of occupied buildings to the east of the Site is classified as GW-2. Post-redevelopment, groundwater throughout the Site will be categorized as GW-2. Groundwater is classified as GW-3 given that all groundwater in the state is considered a potential source of discharge to surface water. The closest surface water body is Fresh Pond, located 1.3 miles to the southwest of the Site.

In summary, Site soil categories include S-2 and S-3 under current use, and S-1 and S-3 under future use. Site groundwater is classified as GW-2 and GW-3.

2.3 Exposure Points and Exposure Point Concentrations

As described in the MCP (310 CMR 40.0006), an Exposure Point is a location of potential contact between a human or environmental receptor and a release of oil and/or hazardous material. An Exposure Point may describe an area or zone of potential exposure, as well as a single discrete point. An Exposure Point Concentration (EPC) is the concentration of oil or hazardous material in a specific medium which a human or environmental receptor may contact at an Exposure Point. Exposure Points and EPCs are described below, by medium.

2.3.1 Soil

For soil, Exposure Points are identified based upon the soil categories selected in Section 2.2.1 and requirements of the MCP (310.CMR 40.1024). No soil hot spot was identified, and Exposure Points were developed considering current use (under development) and future, unrestricted use. The following Exposure Points were identified:

Current S-2: Soil between 0 and 3 feet in unpaved areas
Current S-3: Unpaved soil greater than 3 feet in depth, and all soil covered by pavement, the three-story building, or the foundation of the two-story building
Future S-1: Soil located between 0 and 15 feet across the Site

A Future S-3 Exposure Point was not identified, as soil greater than 15 feet bgs is not anticipated to be contacted, even under future redevelopment scenarios.

EPCs were developed in accordance with the MCP (310 CMR 40.0926(3)(a)(2)). Specifically, to streamline the assessment process, the maximum detected concentration, provided in Table 1, was selected as the EPC for each COC.

2.3.2 Groundwater

For the purposes of evaluating Site groundwater, the Exposure Point was selected as groundwater, as represented by monitoring wells located throughout the Site. The EPC was developed as the maximum detected concentration in groundwater at any monitoring well, as provided in Table 3. The maximum detected concentration was selected in accordance with the MCP (310 CMR 40.0926(3)(a)(3). Two rounds of groundwater sampling did not fully characterize the effects of seasonal variation on groundwater concentrations.

2.4 Comparison to Method 1 Standards

To complete a Method 1 RC, EPCs in soil and groundwater are compared to applicable MCP Method 1 Standards. Applicable Method 1 Standards are provided in Table 4 for soil considering current exposures, Table 5 for soil considering future exposures, and Table 6 for groundwater. Because groundwater is classified as GW-2 and GW-3, multiple soil standards apply to the Site. Applicable Method 1 Soil Standards for current exposures include S-2/GW-2, S-2/GW-3, S-3/GW-2, and S-3/GW-3. Applicable Method 1 Soil Standards for unrestricted future exposures include S-1/GW-2 and S-1/GW-3. Groundwater standards that apply include GW-2 and GW-3.

A condition of no significant risk of harm to health, safety, public welfare and the environment exists if no EPC is greater than the applicable MCP Method 1 Soil or Groundwater Standard (310 CMR 40.0973(7)). As shown in Table 4 and Table 5, no soil EPC exceeds its applicable MCP Method 1 Soil Standards. As shown in Table 6, no groundwater EPC exceeds the MCP Method 1 GW-2 or GW-3 Standard, applicable at the Site. Therefore, a condition of no significant risk of harm to health, public welfare and the environment has been achieved at the Site.

2.5 Uncertainty Analysis

Information is presented herein on the uncertainty associated with the risk characterization, including information gaps and steps taken to counter the gaps. The Site investigation was conducted recently; therefore, there is low uncertainty regarding current concentrations of residual petroleum in soil. While metals other than lead have not been assessed in soil samples remaining on-Site, the use of historic sampling results is considered appropriate, as metals were not identified as analytes used in historic operations, and all metals concentrations with the exception of lead were detected at concentrations lower than Method 1 Standards.

PAHs and lead were excluded as COCs based upon a comparison to background concentrations. There is some uncertainty associated with PAH and lead at the Site, based on one sample with elevated concentrations at the Site. As documented by MassDEP (MassDEP, 2002), background concentrations range by orders of magnitude. For example, the concentrations of benzo(a)pyrene ranged from 0.031 to 230 mg/kg in the background data set used by MassDEP to identify the background concentrations in fill containing coal and wood ash. Due to the high variability sometimes identified in background samples, elevated concentrations may appear to be present in soil not impacted by a Site. The background designation is supported by the adequate number of sampling points (81), the low percent of samples with detected concentrations above the MassDEP background point estimate (1/81, or 1.2%), and because the

Site data set as a whole reflects lower concentrations than the MassDEP-identified background data set.

The maximum detected soil concentration was selected as the EPC to evaluate risk at all Exposure Points, which represents a high bias.

Groundwater monitoring occurred over a period of two monitoring rounds. While there is some uncertainty with the seasonal fluctuation of groundwater concentration, this uncertainty is not considered to be significant. The maximum groundwater concentration was selected as the EPC, and groundwater concentrations are well below Method 1 Groundwater Standards.

3.0 Characterization of Risk to Safety

An evaluation of the risk of harm to safety is completed to determine whether conditions at the Site related to a release of OHM may pose a threat of physical harm or bodily injury to people. As described in the MCP (310 CMR 40.0960), conditions at the Site are evaluated below with respect to each of these potential safety impacts:

- The presence of rusted or corroded drums or containers, open pits, lagoons or other dangerous structures;
- Any threat of fire or explosion, including the presence of explosive vapors resulting from a release of oil and/or hazardous material;
- Any uncontained materials which exhibit the characteristics of corrosivity, reactivity or flammability described at 310 CMR 40.0347; and
- Conditions relative to applicable or suitably analogous safety standards.

Residual petroleum impacts are present in soil and groundwater at the Site, and the Licensed Site Professional, Robert Bird of EnviroTrac, has indicated that no dangerous structures are present at the Site, and no threat of fire or explosion is present due to the presence of contaminants in the environment. Further, no uncontained corrosive, reactive or flammable materials have been identified relative to the presence of Site-related contamination. No applicable or suitably analogous safety standard was identified relative to the presence of COCs. Based upon a review of current conditions, a condition of no significant risk of harm to safety exists at the Site.

4.0 CONCLUSIONS

The RC conclusions are as follows:

1. A condition of no significant risk of harm to health, public welfare and the environment has been achieved, due to the following (310 CMR 40.0973(7)):
    a. No Soil Exposure Point Concentration is greater than the applicable MCP Method 1 Soil Standards; and
    b. No Groundwater Exposure Point Concentration is greater than the applicable MCP Method 1 Groundwater Standards.

2. A condition of no significant risk of harm to safety exists at the Site (310 CMR 40.0960).

5.0 LIMITATIONS

The analysis and conclusions provided in this Report are based solely on the Services provided pursuant to the proposal provided to EnviroTrac on September 20. 2017. Collaborative Risk Solutions LLC shall not be held liable for the existence of any condition, the discovery of which would have required the performance of services not expressly identified within the proposal.

This work is dependent upon the analytical data and information provided to Collaborative Risk Solutions LLC by EnviroTrac. Collaborative Risk Solutions LLC did not independently verify the accuracy or completeness of the data, information, or materials received from EnviroTrac during the performance of services, and no warranty or guarantee of accuracy is made by Collaborative Risk Solutions LLC.

6.0 References

Massachusetts Department of Environmental Protection (MassDEP) 2002. Technical Update: Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil. Office of Research & Standards. May 2002.

TABLES

TABLE 1
SOIL SUMMARY
343-351 Summer Street, Somerville, MA

Parameter	Number Detected	Number Analyzed	Frequency of Detection	Minimum Detected	Maximum Detected	Average Concentration	MassDEP Fill Background	Maximum Exceeds Fill Background?
Extractable Petroleum Hydrocarbons (mg/kg)								
C9-C18 Aliphatics	6	30	20%	11	245	22.9	NA	
C19-C36 Aliphatics	11	30	37%	13	400	30.7	NA	
C11-C22 Aromatics	11	30	37%	17	360	33.4	NA	
Acenaphthene	5	30	17%	0.16	1.5	0.3	2	
Acenaphthylene	1	30	3%	0.16	0.16	0.2	1	
Anthracene	8	30	27%	0.24	3	0.4	4	
Benzo(a)anthracene	9	30	30%	0.39	8.9	0.8	9	
Benzo(a)pyrene	9	30	30%	0.39	8.3	0.8	7	X
Benzo(b)fluoranthene	9	30	30%	0.55	14	1.1	8	X
Benzo(g,h,i)perylene	9	30	30%	0.24	6.3	0.6	3	X
Benzo(k)fluoranthene	8	30	27%	0.19	4.6	0.4	4	X
Chrysene	9	30	30%	0.42	11	0.9	7	X
Dibenz(a,h)anthracene	4	30	13%	0.18	1.5	0.3	1	X
Fluoranthene	9	30	30%	1	28	1.9	10	X
Fluorene	6	30	20%	0.11	1.7	0.3	2	
Indeno(1,2,3-cd)pyrene	8	30	27%	0.25	6.6	0.5	3	X
2-Methylnaphthalene	2	30	7%	0.18	1.39	0.2	1	X
Naphthalene	2	30	7%	0.28	2	0.3	1	X
Phenanthrene	9	30	30%	0.83	20	1.4	20	
Pyrene	9	30	30%	1	26	1.7	20	X
Polycyclic Aromatic Hydrocarbons (mg/kg)								
Acenaphthene	4	52	8%	0.129	0.142	0.040	2	
Acenaphthylene	4	52	8%	0.0944	0.232	0.042	1	
Anthracene	8	52	15%	0.0238	0.715	0.077	4	
Benzo(a)anthracene	12	52	23%	0.0262	2.1	0.173	9	
Benzo(a)pyrene	9	52	17%	0.0219	1.87	0.178	7	
Benzo(b)fluoranthene	11	52	21%	0.0202	2.27	0.177	8	
Benzo(g,h,i)perylene	8	52	15%	0.0326	1.09	0.106	3	
Benzo(k)fluoranthene	9	52	17%	0.0273	0.819	0.095	4	
Chrysene	12	52	23%	0.0262	2.05	0.168	7	
Dibenz(a,h)anthracene	6	52	12%	0.034	0.329	0.051	1	
Fluoranthene	14	52	27%	0.0212	3.67	0.286	10	
Fluorene	4	52	8%	0.102	0.204	0.041	2	
Indeno(1,2,3-cd)pyrene	8	52	15%	0.019	1.27	0.133	3	
Naphthalene	4	52	8%	0.0346	0.0781	0.034	1	
Phenanthrene	10	52	19%	0.0528	2.67	0.196	20	
Pyrene	14	52	27%	0.0375	3.75	0.302	20	
Metals (mg/kg)								
Arsenic	34	35	97%	1.5	15.9	7.6	20	
Barium	35	35	100%	11	195	63	50	X
Beryllium	17	22	77%	0.35	1.2	0.49	0.9	X
Cadmium	4	35	11%	0.48	0.77	0.31	3	
Chromium	35	35	100%	8.2	77	23	40	X
Lead	76	76	100%	1.7	830	42	600	X
Mercury	19	35	54%	0.038	3.3	0.27	1	X
Nickel	22	22	100%	7.5	54	20	30	X
Silver	7	35	20%	0.71	2.6	0.55	5	
Vanadium	22	22	100%	14	75	34	30	X
Zinc	22	22	100%	25.9	245	76	300	

Notes:

1 Soil summary of EPH, VPH and lead soil sampling results included in the Soil Table - samples remaining xlsx file provided by EnviroTrac on February 5, 2018 Soil summary for the remaining metals are based on historical soil sampling results provided by EnviroTrac on October 11, 2017 Only constituents detected at least once are shown

2 Average concentrations were calculated using one-half of the method detection limit as a surrogate concentration for non-detect values

3 MassDEP background concentrations in soil containing coal ash or wood ash associated with fill material were obtained from MassDEP Technical Update Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil Office of Research and Standards, May 2002.

4 mg/kg = milligrams per kilogram, NA = Not Available

TABLE 2
BACKGROUND COMPARISON AND SELECTION OF CONTAMINANTS OF CONCERN
343-351 Summer Street, Somerville, MA

Parameter	50th Percentile		90th Percentile		Maximum		Contaminant of Concern
	Site	Background	Site	Background	Site	Background	
Extractable Petroleum Hydrocarbons (mg/kg)							
C9-C18 Aliphatics	6	NA	29	NA	245	NA	X
C19-C36 Aliphatics	12	NA	44	NA	400	NA	X
C11-C22 Aromatics	12	NA	64	NA	360	NA	X
Benzo(a)pyrene	0.13	0.3	1.0	7.4	8.3	230	
Benzo(b)fluoranthene	0.055	0.4	1.2	8.4	14	270	
Benzo(g,h,i)perylene	0.055	0.2	0.52	3.1	6.3	77	
Benzo(k)fluoranthene	0.055	0.21	0.49	4	4.6	150	
Chrysene	0.060	0.35	1.2	7.3	11	240	
Dibenz(a,h)anthracene	0.055	0.17	0.28	1.1	1.5	39	
Fluoranthene	0.060	0.61	1.9	14	28	490	
Indeno(1,2,3-cd)pyrene	0.125	0.2	0.57	2.8	6.6	100	
2-Methylnaphthalene	0.253	0.15	0.33	0.96	1.39	13	X
Naphthalene	0.050	0.17	0.28	1.4	2	28	
Pyrene	0.060	0.61	1.9	16	26	440	
Metals (mg/kg)							
Barium	54.1	15.7	115	45.2	195	104	X
Beryllium	0.45	0.5	0.82	0.88	1.2	7.5	X
Chromium	18	15	44	39	77	530	X
Lead	0.0	53	0.0	570	830	11000	
Mercury	0.045	0.15	0.47	1.4	3.3	23	X
Nickel	16	14	33	31	54	220	X
Vanadium	31.9	10.3	56.5	28.5	75.2	46.6	X

Notes:

1. Soil statistics calculated for soil included in the Soil Table - samples remaining.xlsx file provided by EnviroTrac. PAH concentrations reported from EPH and sevni-volatile organic compound (SVOC) analyses were combined for the purposes of statistical analysis when only one analysis was run on the sample. One-half of the detection limit was used as a surrogate value if a constituent was not detected in a sample.

2. Background concentration statistics for polycyclic aromatic hydrocarbons and lead include the Central Artery/Tunnel Project values presented in the MassDEP Technical Update: Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil. Office of Research and Standards, May 2002.

3. Site concentrations were compared to the Central Artery/Tunnel Project values, when available, to determine whether Site concentrations are consistent with background concentrations. MassDEP used the Central Artery/Tunnel Project statistics to establish background concentrations; therefore, statistics from that dataset were used for comparison purposes. No Central Artery/Tunnel Project values were available for barium or vanadium; MassDEP-reported natural soil background statistics were used as background concentrations for barium and vanadium.

4. Contaminants of Concern (COCs) include those constituents without available MassDEP background concentrations, and those constituents with Site statistcal values greater than corresponding background statistical values. 2-methylnaphthalene, beryllium, and mercury were also retained as COCs, as described in the text.

5. mg/kg = milligrams per kilogram; NA = Not Available

TABLE 3
GROUNDWATER SUMMARY
343-351 Summer Street, Somerville, MA

Parameter	Number of Detects	Number of Samples	Frequency of Detection	Minimum Detected	Maximum Detected	Average Concentration
Volatile Organic Compounds (ug/L)						
Acetone	1	9	11%	14.5	14.5	6.06
Extractable Petroleum Hydrocarbons (ug/L)						
C19-C36 Aliphatics	1	20	5%	362	362	71
Acenaphthene	1	20	5%	0.14	0.14	1.5
Acenaphthylene	1	20	5%	0.14	0.14	1.5
Anthracene	1	20	5%	0.36	0.36	1.5
Benzo(a)anthracene	4	20	20%	0.06	0.89	1.5
Benzo(a)pyrene	4	20	20%	0.11	0.88	1.5
Benzo(b)fluoranthene	4	20	20%	0.055	1.5	1.5
Benzo(g,h,i)perylene	2	20	10%	0.14	0.72	1.5
Benzo(k)fluoranthene	2	20	10%	0.13	0.65	1.5
Fluoranthene	4	20	20%	0.11	2.1	1.6
Fluorene	1	20	5%	0.17	0.17	1.5
Indeno(1,2,3-cd)pyrene	4	20	20%	0.14	1	1.5
Naphthalene	9	20	45%	0.23	0.46	1.6
Phenanthrene	7	20	35%	0.056	1.2	1.5
Pyrene	2	20	10%	0.42	1.8	1.6
Metals (ug/L)						
Arsenic	7	19	37%	4.4	29.5	6.62
Barium	1	19	5%	66.9	66.9	27.2
Lead	2	19	11%	3.3	8.5	2.4
Selenium	5	19	26%	11.3	17.8	7.22
Zinc	3	19	16%	26	293	26.6

Notes:

1. Summary of Site groundwater concentrations, considering groundwater sampled in August 2016 and March 2017.
2. Average concentrations were calculated using one-half of the detection limit as a surrogate concentration for non-detect values.
3. All detected analytes were retained as COCs.
4. ug/L - microgram per liter

TABLE 4
METHOD 1 STANDARDS COMPARISON – CURRENT SOIL
343-351 Summer Street, Somerville, MA

Concern	Method 1 Standards				Exposure Point Concentration	EPC Exceeds the Lowest Standard?
	S-2/GW-2	S-2/GW-3	S-3/GW-2	S-3/GW-3		
Extractable Petroleum Hydrocarbons						
C9-C18 Aliphatics	3,000	3,000	5,000	5,000	245	No
C19-C36 Aliphatics	5,000	5,000	5,000	5,000	400	No
C11-C22 Aromatics	3,000	3,000	5,000	5,000	360	No
2-Methylnaphthalene	80	500	80	500	1.4	No
Metals						
Barium	3,000	3000	5,000	5000	195	No
Beryllium	200	200	200	200	1.2	No
Chromium	200	200	200	200	77	No
Mercury	30	30	30	30	3	No
Nickel	1,000	1,000	1,000	1,000	54	No
Vanadium	700	700	700	700	75	No

Notes:

1. Method 1 Standards were obtained at 310 CMR 40.0975(6)(a).
2. The EPC equals the maximum concentration detected at the Site (0-15'), in accordance with the MCP (310 CMR 40.0926(3)(a)(2)).
3. All values are provided in mg/kg = milligrams per kilogram

TABLE 5
METHOD 1 STANDARDS COMPARISON – FUTURE SOIL
343-351 Summer Street, Somerville, MA

Contaminant of Concern	Method 1 Standards S-1/GW-2	Method 1 Standards S-1/GW-3	Exposure Point Concentration	EPC Exceeds the Lowest Standard?
Extractable Petroleum Hydrocarbons				
C9-C18 Aliphatics	1,000	1,000	245	No
C19-C36 Aliphatics	3,000	3,000	400	No
C11-C22 Aromatics	1,000	1,000	360	No
2-Methylnaphthalene	80	300	1.4	No
Metals				
Barium	1,000	1000	195	No
Beryllium	90	90	1.2	No
Chromium	100	100	77	No
Mercury	20	20	3.3	No
Nickel	600	600	54	No
Vanadium	400	400	75	No

Notes:

1. Method 1 Standards were obtained at 310 CMR 40.0975(6)(a).
2. The Exposure Point encompasses the entire Site. The EPC equals the maximum concentration, in accordance with the MCP (310 CMR 40.0926(3)(a)(2)).
2. All values reported in mg/kg = milligrams per kilogram

TABLE 6
METHOD 1 STANDARDS COMPARISON – CURRENT/FUTURE GROUNDWATER
343-351 Summer Street, Somerville, MA

Contaminant of Concern	Method 1 Standards GW-2	Method 1 Standards GW-3	Exposure Point Concentration	EPC Exceeds the Lowest Standard?
Volatile Organic Compounds				
Acetone	50,000	50,000	14.5	No
Extractable Petroleum Hydrocarbons				
C19-C36 Aliphatics	NA	50,000	362	No
Acenaphthene	NA	50,000	0.14	No
Acenaphthylene	10,000	50,000	0.14	No
Anthracene	NA	50,000	0.36	No
Benzo(a)anthracene	NA	50,000	0.89	No
Benzo(a)pyrene	NA	500	0.88	No
Benzo(b)fluoranthene	NA	400	1.5	No
Benzo(g,h,i)perylene	NA	20	0.72	No
Benzo(k)fluoranthene	NA	100	0.65	No
Fluoranthene	NA	200	2.1	No
Fluorene	NA	40	0.17	No
Indeno(1,2,3-cd)pyrene	NA	100	1	No
Naphthalene	700	20,000	0.46	No
Phenanthrene	NA	10,000	1.2	No
Pyrene	NA	20	1.8	No
Metals				
Arsenic	NA	900	29.5	No
Barium	NA	50,000	66.9	No
Lead	NA	10	8.5	No
Selenium	NA	100	17.8	No
Zinc	NA	900	293	No

Notes:

1. Method 1 Standards were obtained at 310 CMR 40.0975(6)(a). NA = Not Applicable
2. The Exposure Point encompasses the entire Site.
3. The EPC equals the maximum concentration, in accordance with the MCP (310 CMR 40.0926(3)(a)(2)).
4. All values reported in ug/L = micrograms per liter.

APPENDIX C

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February 1, 2018

Dena Tomassi
EnviroTrac Ltd
2 Merchant Street, Suite 2
Sharon, MA 02067

Project Location 343-351 Summer St
Client Job Number
Project Number 03 990202 01
Laboratory Work Order Number 18A1021

Enclosed are results of analyses for samples received by the laboratory on January 30, 2018 If you have any questions concerning this report, please feel free to contact me

Sincerely,

Aaron L Benoit
Project Manager

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EnviroTrac Ltd
2 Merchant Street, Suite 2
Sharon, MA 02067
ATTN Dena Tomassi

REPORT DATE 2/1/2018

PURCHASE ORDER NUMBER

PROJECT NUMBER 03 990202 01

ANALYTICAL SUMMARY

WORK ORDER NUMBER 18A1021

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report

PROJECT LOCATION 343-351 Summer St

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
S-76	18A1021-01	Soil		SM 2540G	
				SW-846 6010C-D	
				SW-846 8270D	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report

For method 8270, only PAHs were requested and reported
For method 6010, only lead was requested and reported

SW-846 8270D

Qualifications:

R-05

Laboratory fortified blank duplicate RPD is outside of control limits Reduced precision is anticipated for any reported value for this compound

Analyte & Samples(s) Qualified:

Fluoranthene
18A1021-01[S-76], B195848-BLK1, B195848-BS1, B195848-BSD1

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Tod E Kopyscinski
Laboratory Director

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ANALYTICAL LABORATORY
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Project Location 343-351 Summer St | Sample Description | Work Order 18A1021
Date Received 1/30/2018
Field Sample #: S-76 | Sampled 1/29/2018 07:55
Sample ID: 18A1021-01
Sample Matrix Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Acenaphthylene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Benzo(a)anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Benzo(a)pyrene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Benzo(b)fluoranthene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Benzo(g,h,i)perylene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Benzo(k)fluoranthene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Chrysene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Dibenz(a,h)anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Fluoranthene	ND	0.22	mg/Kg dry	1	R-05	SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Fluorene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Indeno(1,2,3-cd)pyrene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
2-Methylnaphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Naphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Phenanthrene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL
Pyrene	ND	0.22	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 10:40	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Nitrobenzene-d5	56.6	30-130		2/1/18 10:40
2-Fluorobiphenyl	58.6	30-130		2/1/18 10:40
p-Terphenyl-d14	68.7	30-130		2/1/18 10:40

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location 343-351 Summer St | Sample Description | Work Order 18A1021
Date Received 1/30/2018
Field Sample #: S-76 | Sampled 1/29/2018 07:55
Sample ID: 18A1021-01
Sample Matrix Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	12	0.64	mg/Kg dry	1		SW-846 6010C-D	1/31/18	2/1/18 13:49	QNW

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Project Location 343-351 Summer St | Sample Description | Work Order 18A1021

Date Received 1/30/2018

Field Sample #: S-76 | Sampled 1/29/2018 07:55

Sample ID 18A1021-01

Sample Matrix Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.0		% Wt	1		SM 2540G	1/31/18	2/1 18 7:06	MRL

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18A1021-01 [S-76]	B195893	01/31/18

Prep Method: SW-846 3050B-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18A1021-01 [S-76]	B195877	1.50	50.0	01/31/18

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18A1021-01 [S-76]	B195848	30.0	1.00	01/31/18

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B195848 - SW-846 3546										
Blank (B195848-BLK1)			Prepared & Analyzed: 01/31/18							
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							R-05
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	*2.59*		mg/Kg wet	3.33		77.8	30-130			
Surrogate: 2-Fluorobiphenyl	*2.67*		mg/Kg wet	3.33		80.0	30-130			
Surrogate: p-Terphenyl-d14	*3.07*		mg/Kg wet	3.33		92.1	30-130			
LCS (B195848-BS1)			Prepared & Analyzed: 01/31/18							
Acenaphthene	1.13	0.17	mg/Kg wet	1.67		67.6	40-140			
Acenaphthylene	1.06	0.17	mg/Kg wet	1.67		63.5	40-140			
Anthracene	1.22	0.17	mg/Kg wet	1.67		73.2	40-140			
Benzo(a)anthracene	1.19	0.17	mg/Kg wet	1.67		71.3	40-140			
Benzo(a)pyrene	1.08	0.17	mg/Kg wet	1.67		64.7	40-140			
Benzo(b)fluoranthene	1.17	0.17	mg/Kg wet	1.67		70.3	40-140			
Benzo(g,h,i)perylene	1.49	0.17	mg/Kg wet	1.67		89.2	40-140			
Benzo(k)fluoranthene	1.26	0.17	mg/Kg wet	1.67		75.6	40-140			
Chrysene	1.17	0.17	mg/Kg wet	1.67		70.3	40-140			
Dibenz(a,h)anthracene	1.49	0.17	mg/Kg wet	1.67		89.2	40-140			
Fluoranthene	1.16	0.17	mg/Kg wet	1.67		69.5	40-140			R-05
Fluorene	1.09	0.17	mg/Kg wet	1.67		65.5	40-140			
Indeno(1,2,3-cd)pyrene	1.33	0.17	mg/Kg wet	1.67		79.8	40-140			
2-Methylnaphthalene	1.21	0.17	mg/Kg wet	1.67		72.7	40-140			
Naphthalene	1.05	0.17	mg/Kg wet	1.67		62.8	40-140			
Phenanthrene	1.20	0.17	mg/Kg wet	1.67		72.1	40-140			
Pyrene	1.24	0.17	mg/Kg wet	1.67		74.1	40-140			
Surrogate: Nitrobenzene-d5	*2.24*		mg/Kg wet	3.33		67.2	30-130			
Surrogate: 2-Fluorobiphenyl	*2.35*		mg/Kg wet	3.33		70.4	30-130			
Surrogate: p-Terphenyl-d14	*2.65*		mg/Kg wet	3.33		79.5	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B195848 - SW-846 3546										
LCS Dup (B195848-BSD1)			Prepared & Analyzed: 01/31/18							
Acenaphthene	1.00	0.17	mg/Kg wet	1.67		60.0	40-140	11.9	30	
Acenaphthylene	0.943	0.17	mg/Kg wet	1.67		56.6	40-140	11.6	30	
Anthracene	0.992	0.17	mg/Kg wet	1.67		59.5	40-140	20.6	30	
Benzo(a)anthracene	1.07	0.17	mg/Kg wet	1.67		64.0	40-140	10.8	30	
Benzo(a)pyrene	1.03	0.17	mg/Kg wet	1.67		61.7	40-140	4.68	30	
Benzo(b)fluoranthene	0.894	0.17	mg/Kg wet	1.67		53.6	40-140	26.9	30	
Benzo(g,h,i)perylene	1.50	0.17	mg/Kg wet	1.67		90.1	40-140	0.959	30	
Benzo(k)fluoranthene	1.05	0.17	mg/Kg wet	1.67		62.8	40-140	18.5	30	
Chrysene	1.03	0.17	mg/Kg wet	1.67		61.5	40-140	13.3	30	
Dibenz(a,h)anthracene	1.13	0.17	mg/Kg wet	1.67		67.9	40-140	27.2	30	
Fluoranthene	0.830	0.17	mg/Kg wet	1.67		49.8	40-140	**33.1**	* 30	R-05
Fluorene	0.961	0.17	mg/Kg wet	1.67		57.6	40-140	12.8	30	
Indeno(1,2,3-cd)pyrene	1.12	0.17	mg/Kg wet	1.67		66.9	40-140	17.6	30	
2-Methylnaphthalene	1.02	0.17	mg/Kg wet	1.67		61.0	40-140	17.6	30	
Naphthalene	0.936	0.17	mg/Kg wet	1.67		56.2	40-140	11.2	30	
Phenanthrene	1.01	0.17	mg/Kg wet	1.67		60.7	40-140	17.2	30	
Pyrene	1.12	0.17	mg/Kg wet	1.67		67.0	40-140	10.1	30	
Surrogate: Nitrobenzene-d5	*1.68*		mg/Kg wet	3.33		50.4	30-130			
Surrogate: 2-Fluorobiphenyl	*2.10*		mg/Kg wet	3.33		63.0	30-130			
Surrogate: p-Terphenyl-d14	*2.41*		mg/Kg wet	3.33		72.2	30-130			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B195877 - SW-846 3050B										
Blank (B195877-BLK1)				Prepared 01/31/18 Analyzed 02/01/18						
Lead	ND	0 50	mg/Kg wet							
LCS (B195877-BS1)				Prepared 01/31/18 Analyzed 02/01/18						
Lead	94 2	1 4	mg/Kg wet	92 3		102	82 8-117			
LCS Dup (B195877-BSD1)				Prepared 01/31/18 Analyzed 02/01/18						
Lead	89 8	1 4	mg/Kg wet	92 3		97 3	82 8-117	4 85	30	
MRL Check (B195877-MRL1)				Prepared 01/31/18 Analyzed 02/01/18						
Lead	0 530	0 50	mg/Kg wet	0 498		106	80-120			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B195893 - % Solids										
Duplicate (B195893-DUP1)		**Source: 18A1021-01**		Prepared 01/31/18 Analyzed 02/01/18						
% Solids	78 4		% Wt		78 0			0 450	20	

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits
†	Wide recovery limits established for difficult compound
‡	Wide RPD limits established for difficult compound
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded
	No results have been blank subtracted unless specified in the case narrative section
R-05	Laboratory fortified blank duplicate RPD is outside of control limits Reduced precision is anticipated for any reported value for this compound

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C-D in Soil	
Lead	CT,NH,NY,AIHA,ME,VA,NC
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
SW-846 8270D in Water	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025 2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018

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JT 18A1091

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Email: info@contestlabs.com

http://www.contestlabs.com

Doc # 381 Rev 1_03242017

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow MA 01028

Page 1 of 1

Company Name: EnviroTrac Ltd.
Address: 1 Merchant St, Suite #2
Phone: 781-793-0074
Project Name: Maggiore Somerville
Project Location: 343-351 Summer Street
Project Number: 03.9902a2.01
Project Manager: D. Tomassi
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: L. Main

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
CLP Like Data Pkg Required ☐
Email To: denat@envirotrac.com
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order #	Client Sample ID / Description	Collection Date/Time	Composite	Grab	Matrix	Container Type	Pb	PAHs	# of Containers	Preservation Code	Container Code
01	S-76	1/29/18 7:55	X		S	U	X	X	1	I	A

Dissolved Metals Samples: ○ Field Filtered ○ Lab to Filter
Orthophosphate Samples: ○ Field Filtered ○ Lab to Filter

[1] Matrix Codes: GW = Ground Water, WW = Waste Water, DW = Drinking Water, A = Air, S = Soil, SL = Sludge, SOL = Solid, O = Other (please define)

[2] Preservation Codes: I = Iced, H = HCL, M = Methanol, N = Nitric Acid, S = Sulfuric Acid, B = Sodium Bisulfate, X = Sodium Hydroxide, T = Sodium Thiosulfate, O = Other (please define)

[3] Container Codes: A = Amber Glass, G = Glass, P = Plastic, ST = Sterile, V = Vial, S = Summa Canister, T = Tedlar Bag, O = Other (please define)

Comments:
MCP Report Required. Must meet S-1 Standards

Client requested 2 day turnaround time via phone call - EES 1/31/18

Relinquished by: (signature)	Date/Time:
1/29/18	18:00
Received by: (signature) ET Secure fridge	1/29/18 Date/Time: 18:00
Relinquished by: (signature)	Date/Time
Received by: (signature) for ECS	1/30/18 Date/Time: 1055
Relinquished by: (signature) for ECS	1/30/18 Date/Time: 18:40
Received by: (signature) Sara Taylor	1-30-18 Date/Time: 18:40

Detection Limit Requirements: MA: ; CT: ; Other:

Special Requirements: ☒ MA MCP Required; ☐ MCP Certification Form Required; ☐ CT RCP Required; ☐ RCP Certification Form Required; ☐ MA State DW Required; PWSID #:

Project Entity: ☐ Government ☐ Municipality ☐ MWRA ☐ WRTA ☐ Federal ☐ 21 J ☐ School ☐ City ☐ Brownfield ☐ MBTA

Other: ☐ Chromatogram ☐ AIHA-LAP, LLC

PCB ONLY: ☐ Soxhlet ☐ Non Soxhlet

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Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client: Enviro Trac Ltd

Received By: SL Date: 1-30-18 Time: 18:40

How were the samples received? In Cooler: T No Cooler: ____ On Ice: T No Ice: ____ Direct from Sampling: ____ Ambient: ____ Melted Ice: ____

Were samples within Temperature? 2-6°C: T By Gun #: 557 Actual Temp: 2.4 By Blank #: ____ Actual Temp: -

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client: T Project: T Analysis: T Sampler Name: T ID's: T Collection Dates/Times: T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? ~~R~~/N/A

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? N/A Acid: ____ Base: ____

Who was notified? ____

Who was notified? ____

Who was notified? ____

MS/MSD? F

Is splitting samples required? F

On COC? F

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.	1	250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name	Con-Test Analytical Laboratory	Project #	18A1021
Project Location:	343-351 Summer St.	RTN	

This Form provides certifications for the following data set. [list Laboratory Sample ID Number(s)]

18A1021-01

Matrices: Soil

CAM Protocol (check all that below)

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP EPH CAM IV A ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]
	A response to questions G, H and I below is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.		
H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *All Negative responses must be addressed in an attached Environmental Laboratory case narrative*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Tod Kopyscinski Position: Laboratory Director

Printed Name: Tod E. Kopyscinski Date: 02/01/18

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February 2, 2018

Dena Tomassi
EnviroTrac Ltd
2 Merchant Street, Suite 2
Sharon, MA 02067

Project Location 343-351 Summer St , Somerville
Client Job Number
Project Number 03 990202 01
Laboratory Work Order Number 18A1089

Enclosed are results of analyses for samples received by the laboratory on January 31, 2018 If you have any questions concerning this report, please feel free to contact me

Sincerely

Aaron I. Benoit
Project Manager

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EnviroTrac Ltd
2 Merchant Street, Suite 2
Sharon, MA 02067
ATTN Dena Tomassi

REPORT DATE 2/2/2018

PURCHASE ORDER NUMBER

PROJECT NUMBER 03 990202 01

ANALYTICAL SUMMARY

WORK ORDER NUMBER 18A1089

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report

PROJECT LOCATION 343-351 Summer St , Somerville

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
S-77	18A1089-01	Soil		SM 2540G	
				SW-846 6010C-D	
				SW-846 8270D	
S-78	18A1089-02	Soil		SM 2540G	
				SW-846 6010C-D	
				SW-846 8270D	
S-79	18A1089-03	Soil		SM 2540G	
				SW-846 6010C-D	
				SW-846 8270D	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report

For method 6010, only lead was requested and reported

SW-846 6010C-D

Qualifications:

M-10

The reporting limit verification for the AIHA lead program is outside of control limits for this element Any reported result at or near the detection limit may be biased on the high side

Analyte & Samples(s) Qualified:

Lead
18A1089-01[S-77], 18A1089-02[S-78], B195943-MRL1

SW-846 8270D

Qualifications:

R-05

Laboratory fortified blank duplicate RPD is outside of control limits Reduced precision is anticipated for any reported value for this compound

Analyte & Samples(s) Qualified:

Fluoranthene
18A1089-01[S-77], 18A1089-02[S-78], 18A1089-03[S-79], B195848-BLK1, B195848-BS1, B195848-BSD1

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Tod E Kopyscinski
Laboratory Director

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Project Location 343-351 Summer St , Somerville Sample Description Work Order 18A1089
Date Received 1/31/2018
Field Sample # S-77 Sampled 1/31/2018 11 52
Sample ID 18A1089-01
Sample Matrix Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Acenaphthylene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Anthracene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Benzo(a)anthracene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Benzo(a)pyrene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Benzo(b)fluoranthene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Benzo(g,h,i)perylene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Benzo(k)fluoranthene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Chrysene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Dibenz(a,h)anthracene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Fluoranthene	ND	0 20	mg/Kg dry	1	R-05	SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Fluorene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Indeno(1,2,3-cd)pyrene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
2-Methylnaphthalene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Naphthalene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Phenanthrene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL
Pyrene	ND	0 20	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 29	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Nitrobenzene-d5	53 7	30-130		2/1/18 15 29
2-Fluorobiphenyl	65 3	30-130		2/1/18 15 29
p-Terphenyl-d14	73 8	30-130		2/1/18 15 29

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Project Location 343-351 Summer St , Somerville Sample Description Work Order 18A1089
Date Received 1/31/2018
Field Sample #: S-77 Sampled 1/31/2018 11 52
Sample ID: 18A1089-01
Sample Matrix Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	6 2	0 58	mg/Kg dry	1	M-10	SW-846 6010C-D	2/1/18	2/1/18 15 23	QNW

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Project Location 343-351 Summer St . Somerville Sample Description Work Order 18A1089
Date Received 1 31 2018
Field Sample #: S-77 Sampled 1 31 2018 11 52
Sample ID: 18A1089-01
Sample Matrix Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87 0		% Wt	1		SM 2540G	2/1/18	2/1/18 14 15	MRL

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Project Location 343-351 Summer St . Somerville Sample Description Work Order 18A1089
Date Received 1/31/2018
Field Sample #: S-78 Sampled 1/31/2018 12 00
Sample ID: 18A1089-02
Sample Matrix Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Acenaphthylene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Anthracene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1 31/18	2/1/18 15 55	BGL
Benzo(a)anthracene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Benzo(a)pyrene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Benzo(b)fluoranthene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Benzo(g,h,i)perylene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1 18 15 55	BGL
Benzo(k)fluoranthene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Chrysene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Dibenz(a,h)anthracene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Fluoranthene	ND	0 19	mg/Kg dry	1	R-05	SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Fluorene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Indeno(1,2,3-cd)pyrene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
2-Methylnaphthalene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Naphthalene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1 18 15 55	BGL
Phenanthrene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 15 55	BGL
Pyrene	ND	0 19	mg/Kg dry	1		SW-846 8270D	1 31/18	2/1 18 15 55	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Nitrobenzene-d5	58 7	30-130		2/1/18 15 55
2-Fluorobiphenyl	57 4	30-130		2/1/18 15 55
p-Terphenyl-d14	57 1	30-130		2/1/18 15 55

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Project Location 343-351 Summer St , Somerville Sample Description Work Order 18A1089
Date Received 1/31 2018
Field Sample # S-78 Sampled 1/31 2018 12 00
Sample ID. 18A1089-02
Sample Matrix Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	5 2	0 55	mg/Kg dry	1	M-10	SW-846 6010C-D	2/1/18	2/1/18 15 28	QNW

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Project Location 343-351 Summer St , Somerville Sample Description Work Order 18A1089
Date Received 1/31/2018
Field Sample #: S-78 Sampled 1/31/2018 12 00
Sample ID: 18A1089-02
Sample Matrix Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89 2		% Wt	1		SM 2540G	2/1/18	2/1/18 14 15	MRL

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Project Location 343-351 Summer St_ Somerville Sample Description Work Order 18A1089
Date Received 1/31/2018
Field Sample # S-79 Sampled 1/31/2018 12 14
Sample ID: 18A1089-03
Sample Matrix Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Acenaphthylene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Anthracene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Benzo(a)anthracene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Benzo(a)pyrene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Benzo(b)fluoranthene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Benzo(g,h,i)perylene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Benzo(k)fluoranthene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Chrysene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Dibenz(a,h)anthracene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Fluoranthene	ND	0 18	mg/Kg dry	1	R-05	SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Fluorene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Indeno(1,2,3-cd)pyrene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
2-Methylnaphthalene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Naphthalene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Phenanthrene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL
Pyrene	ND	0 18	mg/Kg dry	1		SW-846 8270D	1/31/18	2/1/18 16 22	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Nitrobenzene-d5	62 5	30-130		2/1/18 16 22
2-Fluorobiphenyl	63 5	30-130		2/1/18 16 22
p-Terphenyl-d14	68 2	30-130		2/1/18 16 22

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Project Location 343-351 Summer St , Somerville Sample Description Work Order 18A1089
Date Received 1/31/2018
Field Sample #: S-79 Sampled 1/31/2018 12 14
Sample ID: 18A1089-03
Sample Matrix Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	1 7	0 51	mg/Kg dry	1		SW-846 6010C-D	2/1/18	2/1/18 15 32	QNW

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Project Location: 343-351 Summer St., Somerville Sample Description: Work Order: 18A1089

Date Received: 1/31/2018

Field Sample #: S-79 Sampled: 1/31/2018 12:14

Sample ID: 18A1089-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.0		% Wt	1		SM 2540G	2/1/18	2/1/18 14:15	MRL

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18A1089-01 [S-77]	B195946	02/01/18
18A1089-02 [S-78]	B195946	02/01/18
18A1089-03 [S-79]	B195946	02/01/18

Prep Method: SW-846 3051-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18A1089-01 [S-77]	B195943	1.50	50.0	02/01/18
18A1089-02 [S-78]	B195943	1.52	50.0	02/01/18
18A1089-03 [S-79]	B195943	1.51	50.0	02/01/18

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18A1089-01 [S-77]	B195848	30.0	1.00	01/31/18
18A1089-02 [S-78]	B195848	30.0	1.00	01/31/18
18A1089-03 [S-79]	B195848	30.0	1.00	01/31/18

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B195848 - SW-846 3546										
Blank (B195848-BLK1)			Prepared & Analyzed 01/31/18							
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							R-05
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	2.59		mg/Kg wet	3.33		77.8	30-130			
Surrogate: 2-Fluorobiphenyl	2.67		mg/Kg wet	3.33		80.0	30-130			
Surrogate: p-Terphenyl-d14	*3.07*		mg/Kg wet	3.33		92.1	30-130			
LCS (B195848-BS1)			Prepared & Analyzed 01/31/18							
Acenaphthene	1.13	0.17	mg/Kg wet	1.67		67.6	40-140			
Acenaphthylene	1.06	0.17	mg/Kg wet	1.67		63.5	40-140			
Anthracene	1.22	0.17	mg/Kg wet	1.67		73.2	40-140			
Benzo(a)anthracene	1.19	0.17	mg/Kg wet	1.67		71.3	40-140			
Benzo(a)pyrene	1.08	0.17	mg/Kg wet	1.67		64.7	40-140			
Benzo(b)fluoranthene	1.17	0.17	mg/Kg wet	1.67		70.3	40-140			
Benzo(g,h,i)perylene	1.49	0.17	mg/Kg wet	1.67		89.2	40-140			
Benzo(k)fluoranthene	1.26	0.17	mg/Kg wet	1.67		75.6	40-140			
Chrysene	1.17	0.17	mg/Kg wet	1.67		70.3	40-140			
Dibenz(a,h)anthracene	1.49	0.17	mg/Kg wet	1.67		89.2	40-140			
Fluoranthene	1.16	0.17	mg/Kg wet	1.67		69.5	40-140			R-05
Fluorene	1.09	0.17	mg/Kg wet	1.67		65.5	40-140			
Indeno(1,2,3-cd)pyrene	1.33	0.17	mg/Kg wet	1.67		79.8	40-140			
2-Methylnaphthalene	1.21	0.17	mg/Kg wet	1.67		72.7	40-140			
Naphthalene	1.05	0.17	mg/Kg wet	1.67		62.8	40-140			
Phenanthrene	1.20	0.17	mg/Kg wet	1.67		72.1	40-140			
Pyrene	1.24	0.17	mg/Kg wet	1.67		74.1	40-140			
Surrogate: Nitrobenzene-d5	*2.24*		mg/Kg wet	3.33		67.2	30-130			
Surrogate: 2-Fluorobiphenyl	*2.35*		mg/Kg wet	3.33		70.4	30-130			
Surrogate: p-Terphenyl-d14	*2.65*		mg/Kg wet	3.33		79.5	30-130			

Table of Contents

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B195848 - SW-846 3546										
LCS Dup (B195848-BSD1)			Prepared & Analyzed 01/31/18							
Acenaphthene	1.00	0.17	mg/Kg wet	1.67		60.0	40-140	11.9	30	
Acenaphthylene	0.943	0.17	mg/Kg wet	1.67		56.6	40-140	11.6	30	
Anthracene	0.992	0.17	mg/Kg wet	1.67		59.5	40-140	20.6	30	
Benzo(a)anthracene	1.07	0.17	mg/Kg wet	1.67		64.0	40-140	10.8	30	
Benzo(a)pyrene	1.03	0.17	mg/Kg wet	1.67		61.7	40-140	4.68	30	
Benzo(b)fluoranthene	0.894	0.17	mg/Kg wet	1.67		53.6	40-140	26.9	30	
Benzo(g,h,i)perylene	1.50	0.17	mg/Kg wet	1.67		90.1	40-140	0.959	30	
Benzo(k)fluoranthene	1.05	0.17	mg/Kg wet	1.67		62.8	40-140	18.5	30	
Chrysene	1.03	0.17	mg/Kg wet	1.67		61.5	40-140	13.3	30	
Dibenz(a,h)anthracene	1.13	0.17	mg/Kg wet	1.67		67.9	40-140	27.2	30	
Fluoranthene	0.830	0.17	mg/Kg wet	1.67		49.8	40-140	**33.1**	30	R-05
Fluorene	0.961	0.17	mg/Kg wet	1.67		57.6	40-140	12.8	30	
Indeno(1,2,3-cd)pyrene	1.12	0.17	mg/Kg wet	1.67		66.9	40-140	17.6	30	
2-Methylnaphthalene	1.02	0.17	mg/Kg wet	1.67		61.0	40-140	17.6	30	
Naphthalene	0.936	0.17	mg/Kg wet	1.67		56.2	40-140	11.2	30	
Phenanthrene	1.01	0.17	mg/Kg wet	1.67		60.7	40-140	17.2	30	
Pyrene	1.12	0.17	mg/Kg wet	1.67		67.0	40-140	10.1	30	
Surrogate: Nitrobenzene-d5	*1.68*		mg/Kg wet	3.33		50.4	30-130			
Surrogate: 2-Fluorobiphenyl	*2.10*		mg/Kg wet	3.33		63.0	30-130			
Surrogate: p-Terphenyl-d14	*2.41*		mg/Kg wet	3.33		72.2	30-130			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B195943 - SW-846 3051										
Blank (B195943-BLK1)				Prepared & Analyzed: 02/01/18						
Lead	ND	0.50	mg/Kg wet							
LCS (B195943-BS1)				Prepared & Analyzed: 02/01/18						
Lead	82.5	1.5	mg/Kg wet	92.3		89.4	82.8-117			
LCS Dup (B195943-BSD1)				Prepared & Analyzed: 02/01/18						
Lead	81.4	1.5	mg/Kg wet	92.3		88.2	82.8-117	1.34	30	
MRL Check (B195943-MRL1)				Prepared & Analyzed: 02/01/18						
Lead	0.612	0.50	mg/Kg wet	0.502		**122**	* 80-120			M-10

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B195946 - % Solids										
Duplicate (B195946-DUP1)	**Source: 18A1089-01**			Prepared & Analyzed: 02/01/18						
% Solids	82.9		% Wt		87.0			4.87	20	

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits
†	Wide recovery limits established for difficult compound
‡	Wide RPD limits established for difficult compound
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded
	No results have been blank subtracted unless specified in the case narrative section
M-10	The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C-D in Soil	
Lead	CT,NH,NY,AIHA,ME,VA,NC
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
SW-846 8270D in Water	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025 2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015046	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018

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18A1089

Phone: 413-525-2332
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Email: info@contestlabs.com

http://www.contestlabs.com

Doc # 381 Rev 1 03242017

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow MA 01028

Page 1 of 1

Company Name: EnviroTrac Ltd.
Address: 7 Merchant St., Suite #2
Phone: 781-793-0074
Project Name: Maggione Somerville
Project Location: 343-351 Summer Street
Project Number
Project Manager: D. Tomassi
Con-Test Quote Name/Number
Invoice Recipient:
Sampled By: L. Main

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☒ 4-Day ☐

Data Delivery
Format PDF ☒ EXCEL ☒
Other:
CLP Like Data Pkg Required ☐
Email To: jkratz@envirotracltd.com
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order #	Client Sample ID / Description	Collection Date/Time	Collection Time	Composite	Grab	Matrix Code	Cont. Code	Pb	PAHs	# of Containers
01	S-77	1/31/18	11:52		X	S	U	X	X	1
02	S-78	↓	12:00		X	S	U	X	X	1
03	S-79	↓	12:14		X	S	U	X	X	1

Comments: Mcr Report required. Must meet S-1 Standards

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
	1/31/18 15:20		
	1-31-18 1520		
	1-31-18 1825		
	1-31-18 18:25		

Detection Limit Requirements
MA:
GW-1:
Other:

Special Requirements
☒ MA MCP Required
☐ MCP Certification Form Required
☐ CT RCP Required
☐ RCP Certification Form Required
☐ MA State DW Required
PWSID #:

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

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Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client: Enviro

Received By: SC Date: 1-31-18 Time: 18 35

How were the samples received? In Cooler: T No Cooler: ____ On Ice: T No Ice: ____ Direct from Sampling: ____ Ambient: ____ Melted Ice: ____

Were samples within Temperature? 2-6°C: T By Gun #: 577 Actual Temp: 3.2 By Blank #: ____ Actual Temp: ____

Was Custody Seal Intact? NA Were Samples Tampered with? NA

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client: T Project: T Analysis ID's: T Sampler Name: T Collection Dates/Times: T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? ____

Are there Rushes? T Who was notified? Mike

Are there Short Holds? F Who was notified? ____

Is there enough Volume? T

Is there Headspace where applicable? NA MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? NA Acid: ____ Base: ____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.	3	250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name	Con-Test Analytical Laboratory	Project #	18A1089
Project Location	343-351 Summer St., Somerville	RTN	

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

18A1089-01 thru 18A1089-03

Matrices: Soil

CAM Protocol (check all that below)

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP EPH CAM IV A ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF Is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]
	A response to questions G, H and I below is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.		
H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *All Negative responses must be addressed in an attached Environmental Laboratory case narrative*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Tod Kopyscinski Position: Laboratory Director

Printed Name: Tod E. Kopyscinski Date: 02/02/18

SGS ACCUTEST
New England

08/16/16

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e-Hardcopy 2.0
Automated Report

Technical Report for

EnviroTrac

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

03.990202.00

SGS Accutest Job Number: MC47231

Sampling Date: 08/08/16

Report to:

EnviroTrac

denat@envirotrac.com

ATTN: Dena Tomassi

Total number of pages in report: 127

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

H. (Brad) Madadian
Lab Director

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Sample Summary

EnviroTrac

Job No: MC47231

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No. 03.990202.00

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC47231-1	08/08/16	08 30 LMFM	08/09/16	SO	Soil	MW-105
MC47231-2	08/08/16	09 20 LMFM	08/09/16	SO	Soil	MW-106
MC47231-3	08/08/16	10 55 LMFM	08/09/16	SO	Soil	MW-107
MC47231-4	08/08/16	15 05 LMFM	08/09/16	SO	Soil	MW-108
MC47231-5	08/08/16	12 57 LMFM	08/09/16	SO	Soil	B-103
MC47231-6	08/08/16	10 00 LMFM	08/09/16	SO	Soil	B-101
MC47231-7	08/08/16	11 50 LMFM	08/09/16	SO	Soil	B-102
MC47231-8	08/08/16	14 10 LMFM	08/09/16	SO	Soil	B-104

Soil samples reported on a dry weight basis unless otherwise indicated on result page

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EnviroTrac **Job No:** MC47231

Site: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA **Report Date** 8/16/2016 1 10 12 PM

8 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 08/08/2016 and were received at SGS Accutest New England on 08/09/2016 properly preserved, at 1 6 Deg C and intact These Samples received a job number of MC47231 A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job For more information, please refer to QC summary pages

Volatiles by GCMS By Method SW846 8260C

Matrix: SO **Batch ID:** MSM2873

- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- MSM2873-BS/BSD for Methylene chloride are within MCP criteria
- Continuing calibration check standard MSM2873-CC2872 for Dichlorodifluoromethane, Chloromethane exceed 20% Difference (response biased low) Reporting Limit response verified by low-level standard
- Quadratic regression is employed for initial calibration standard MSM2872-ICC2872 for dichlorodifluoromethane, acetone
- MSM2873-BS/BSD for Carbon disulfide are outside MCP criteria
- The response factor (RF) for 2-Butanone at low point (0 073) and at average point (0 088) in the initial calibration MSM2872-ICC2872 are less than the required RF of 0 1 as noted in Table 4 of SW846 8260C

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP48397

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria
- Continuing calibration check standard MSR1817-CC1770 for Benzoic acid, Hexachlorocyclopentadiene exceed 20% Difference (response biased low) Reporting Limit response verified by low-level standard
- OP48397-BS/BSD for Aniline, 4-Chloroaniline (BS only), Hexachlorocyclopentadiene are outside MCP criteria
- Quadratic regression is employed for initial calibration standard MSR1770-ICC1770 for 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, 3,3'-Dichlorobenzidine, bis(2-Ethylhexyl)phthalate, Di-n-octylphthalate, Indeno[1,2,3-cd]pyrene, Dibenz[a,h]anthracene
- Continuing calibration check standard MSR1817-CC1770 for Phenol, N-Nitroso-di-n-propylamine, Di-n-octylphthalate exceed 20% Difference (response biased high) Associated samples may be biased high or are non-detect for this compound

Volatiles by GC By Method MADEP VPH REV 1.1

Matrix: SO **Batch ID:** GAB5238

- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: SO **Batch ID:** OP48394

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Extractables by GC By Method SW846 8082A

Matrix: SO **Batch ID:** OP48393

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26613

- All samples were digested within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- Sample(s) MC47231-8PS, MC47231-8SDL were used as the QC samples for metals
- RPD(s) for Serial Dilution for Beryllium, Cadmium, Silver, Thallium are outside control limits for sample MP26613-SD1 Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MC47231-5 for Selenium Elevated RL due to dilution required for matrix interference
- MC47231-5 for Silver Elevated RL due to dilution required for matrix interference

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP26614

- All samples were digested within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Wet Chemistry By Method EPA 120.1M

Matrix: SO **Batch ID:** GN54521

- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Wet Chemistry By Method SW846 CHAP7

Matrix: SO **Batch ID:** GP20712

- All samples were distilled within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Matrix: SO **Batch ID:** GP20713

- All samples were distilled within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

SGS Accutest New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(MC47231)

Summary of Hits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC47231-1	**MW-105**					
Arsenic		1.5	0.96		mg/kg	SW846 6010C
Barium		11.6	4.8		mg/kg	SW846 6010C
Chromium		9.7	0.96		mg/kg	SW846 6010C
Lead		2.6	0.96		mg/kg	SW846 6010C
Nickel		7.5	3.8		mg/kg	SW846 6010C
Vanadium		14.0	0.96		mg/kg	SW846 6010C
Zinc		25.9	1.9		mg/kg	SW846 6010C
MC47231-2	**MW-106**					
Arsenic		2.2	0.90		mg/kg	SW846 6010C
Barium		22.9	4.5		mg/kg	SW846 6010C
Chromium		13.5	0.90		mg/kg	SW846 6010C
Lead		4.1	0.90		mg/kg	SW846 6010C
Nickel		11.5	3.6		mg/kg	SW846 6010C
Vanadium		18.5	0.90		mg/kg	SW846 6010C
Zinc		28.3	1.8		mg/kg	SW846 6010C
MC47231-3	**MW-107**					
Arsenic		12.9	0.96		mg/kg	SW846 6010C
Barium		95.3	4.8		mg/kg	SW846 6010C
Beryllium		0.77	0.38		mg/kg	SW846 6010C
Chromium		46.5	0.96		mg/kg	SW846 6010C
Lead		11.4	0.96		mg/kg	SW846 6010C
Nickel		33.5	3.8		mg/kg	SW846 6010C
Vanadium		55.6	0.96		mg/kg	SW846 6010C
Zinc		68.5	1.9		mg/kg	SW846 6010C
MC47231-4	**MW-108**					
Arsenic		12.0	0.95		mg/kg	SW846 6010C
Barium		121	4.8		mg/kg	SW846 6010C
Beryllium		0.82	0.38		mg/kg	SW846 6010C
Chromium		53.5	0.95		mg/kg	SW846 6010C
Lead		12.8	0.95		mg/kg	SW846 6010C
Nickel		39.6	3.8		mg/kg	SW846 6010C
Vanadium		61.8	0.95		mg/kg	SW846 6010C
Zinc		78.0	1.9		mg/kg	SW846 6010C
MC47231-5	**B-103**					
Arsenic		15.9	0.99		mg/kg	SW846 6010C

Summary of Hits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Barium		169	5 0		mg/kg	SW846 6010C
Beryllium		1 2	0 40		mg/kg	SW846 6010C
Chromium		77.2	0 99		mg/kg	SW846 6010C
Lead		16.1	0 99		mg/kg	SW846 6010C
Nickel		54 3	4 0		mg/kg	SW846 6010C
Vanadium		75.2	0 99		mg/kg	SW846 6010C
Zinc		96.2	2 0		mg/kg	SW846 6010C
MC47231-6	**B-101**					
Acetone		0 0198	0 010		mg/kg	SW846 8260C
Acenaphthylene		0 112	0 10		mg/kg	SW846 8270D
Benzo(a)anthracene		0.613	0 10		mg/kg	SW846 8270D
Benzo(a)pyrene		0 893	0.25		mg/kg	SW846 8270D
Benzo(b)fluoranthene		0 768	0 10		mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0 681	0 10		mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.703	0 10		mg/kg	SW846 8270D
Chrysene		0.578	0 10		mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0 166	0.10		mg/kg	SW846 8270D
Fluoranthene		0 952	0 10		mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0 689	0 25		mg/kg	SW846 8270D
Phenanthrene		0 273	0 10		mg/kg	SW846 8270D
Pyrene		1 10	0 10		mg/kg	SW846 8270D
Benzo(a)anthracene		0 845	0 46		mg/kg	MADEP EPH REV 1 1
Benzo(a)pyrene		1 33	0 46		mg/kg	MADEP EPH REV 1 1
Benzo(b)fluoranthene		2.24	0 46		mg/kg	MADEP EPH REV 1 1
Benzo(g,h,i)perylene		1.02	0 46		mg/kg	MADEP EPH REV 1 1
Chrysene		0 747	0 46		mg/kg	MADEP EPH REV 1 1
Fluoranthene		1 05	0 46		mg/kg	MADEP EPH REV 1 1
Pyrene		1 05	0 46		mg/kg	MADEP EPH REV 1 1
C11-C22 Aromatics (Unadj)		35.9	19		mg/kg	MADEP EPH REV 1 1
C11-C22 Aromatics		26 7	19		mg/kg	MADEP EPH REV 1 1
Arsenic		5 7	0 88		mg/kg	SW846 6010C
Barium		21 8	4 4		mg/kg	SW846 6010C
Beryllium		0 35	0 35		mg/kg	SW846 6010C
Chromium		12 9	0 88		mg/kg	SW846 6010C
Lead		9 1	0 88		mg/kg	SW846 6010C
Nickel		10 7	3 5		mg/kg	SW846 6010C
Vanadium		18 8	0 88		mg/kg	SW846 6010C
Zinc		25 9	1 8		mg/kg	SW846 6010C
Ignitability (Flashpoint)		> 230			Deg F	SW846 1020
Specific Conductivity		160	0 50		umhos/cm	EPA 120 1M
pH		7.1			su	SW846 9045D

Summary of Hits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC47231-7	**B-102**					
Benzene		0.0013	0 00061		mg/kg	SW846 8260C
Acenaphthylene		0 258	0.12		mg/kg	SW846 8270D
Anthracene		0.358	0.12		mg/kg	SW846 8270D
Benzo(a)anthracene		1.98	0 12		mg/kg	SW846 8270D
Benzo(a)pyrene		1.64	0 31		mg/kg	SW846 8270D
Benzo(b)fluoranthene		1 50	0 12		mg/kg	SW846 8270D
Benzo(g,h,i)perylene		1.08	0 12		mg/kg	SW846 8270D
Benzo(k)fluoranthene		1.56	0.12		mg/kg	SW846 8270D
Chrysene		1 89	0 12		mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.299	0.12		mg/kg	SW846 8270D
Fluoranthene		3 55	0 12		mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		1 10	0 31		mg/kg	SW846 8270D
Phenanthrene		1.27	0 12		mg/kg	SW846 8270D
Pyrene		3 51	0 12		mg/kg	SW846 8270D
Benzo(a)anthracene		1 21	0 57		mg/kg	MADEP EPH REV 1 1
Benzo(a)pyrene		0.997	0 57		mg/kg	MADEP EPH REV 1 1
Benzo(b)fluoranthene		1 93	0 57		mg/kg	MADEP EPH REV 1 1
Benzo(g,h,i)perylene		0.609	0 57		mg/kg	MADEP EPH REV 1 1
Benzo(k)fluoranthene		1.64	0 57		mg/kg	MADEP EPH REV 1 1
Chrysene		1 07	0 57		mg/kg	MADEP EPH REV 1 1
Fluoranthene		1.74	0 57		mg/kg	MADEP EPH REV 1 1
Phenanthrene		0.615	0.57		mg/kg	MADEP EPH REV 1 1
Pyrene		1.46	0 57		mg/kg	MADEP EPH REV 1 1
C11-C22 Aromatics (Unadj)		34.8	23		mg/kg	MADEP EPH REV 1 1
Arsenic		13 5	0 95		mg/kg	SW846 6010C
Barium		195	4 8		mg/kg	SW846 6010C
Beryllium		0.87	0 38		mg/kg	SW846 6010C
Cadmium		0.48	0 38		mg/kg	SW846 6010C
Chromium		40.4	0 95		mg/kg	SW846 6010C
Lead		431	0 95		mg/kg	SW846 6010C
Mercury		3 0	0 20		mg/kg	SW846 7471B
Nickel		30 0	3 8		mg/kg	SW846 6010C
Vanadium		50.0	0 95		mg/kg	SW846 6010C
Zinc		245	1 9		mg/kg	SW846 6010C
Ignitability (Flashpoint)		> 230			Deg F	SW846 1020
Specific Conductivity		376	0 50		umhos/cm	EPA 120 1M
pH		10.0			su	SW846 9045D
MC47231-8	**B-104**					
Acetone		0.0198	0 0085		mg/kg	SW846 8260C
Acenaphthene		0.219	0.10		mg/kg	SW846 8270D
Acenaphthylene		0.171	0 10		mg/kg	SW846 8270D

Summary of Hits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Anthracene		0 828	0 10		mg/kg	SW846 8270D
Benzo(a)anthracene		2 25	0 10		mg/kg	SW846 8270D
Benzo(a)pyrene		1 86	0 25		mg/kg	SW846 8270D
Benzo(b)fluoranthene		1 70	0 10		mg/kg	SW846 8270D
Benzo(g,h,i)perylene		1 07	0 10		mg/kg	SW846 8270D
Benzo(k)fluoranthene		1 59	0 10		mg/kg	SW846 8270D
Chrysene		2 10	0 10		mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.304	0 10		mg/kg	SW846 8270D
Dibenzofuran		0 188	0 10		mg/kg	SW846 8270D
Fluoranthene		5 69	0 10		mg/kg	SW846 8270D
Fluorene		0 230	0 10		mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		1 12	0 25		mg/kg	SW846 8270D
Naphthalene		0 209	0 10		mg/kg	SW846 8270D
Phenanthrene		3 43	0 10		mg/kg	SW846 8270D
Pyrene		5 40	0 10		mg/kg	SW846 8270D
Acenaphthene		0 464	0 46		mg/kg	MADEP EPH REV 1 1
Anthracene		1 09	0 46		mg/kg	MADEP EPH REV 1 1
Benzo(a)anthracene		3 08	0 46		mg/kg	MADEP EPH REV 1 1
Benzo(a)pyrene		2 65	0.46		mg/kg	MADEP EPH REV 1 1
Benzo(b)fluoranthene		4 74	0 46		mg/kg	MADEP EPH REV 1 1
Benzo(g,h,i)perylene		1 49	0 46		mg/kg	MADEP EPH REV 1 1
Chrysene		2 69	0 46		mg/kg	MADEP EPH REV 1 1
Fluoranthene		6 57	0 46		mg/kg	MADEP EPH REV 1 1
Phenanthrene		4 17	0.46		mg/kg	MADEP EPH REV 1 1
Pyrene		5 08	0 46		mg/kg	MADEP EPH REV 1 1
C11-C22 Aromatics (Unadj)		96.8	18		mg/kg	MADEP EPH REV 1 1
C19-C36 Aliphatics		21 4	18		mg/kg	MADEP EPH REV 1 1
C11-C22 Aromatics		63.3	18		mg/kg	MADEP EPH REV 1 1
Arsenic		5 9	0 83		mg/kg	SW846 6010C
Barium		20 7	4 1		mg/kg	SW846 6010C
Chromium		9 9	0 83		mg/kg	SW846 6010C
Lead		28.3	0 83		mg/kg	SW846 6010C
Nickel		7 8	3 3		mg/kg	SW846 6010C
Vanadium		14 5	0 83		mg/kg	SW846 6010C
Zinc		35 4	1 7		mg/kg	SW846 6010C
Ignitability (Flashpoint)		> 230			Deg F	SW846 1020
Specific Conductivity		255	0 50		umhos/cm	EPA 120 1M
pH		8 6			su	SW846 9045D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-105		
Lab Sample ID:	MC47231-1	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	MADEP EPH REV 1 1 SW846 3546	**Percent Solids:**	84 1
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15250 D	1	08/15/16	TA	08/10/16	OP48394	GDE851
Run #2							

	Initial Weight	Final Volume
Run #1	11 1 g	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0 54	mg/kg	
208-96-8	Acenaphthylene	ND	0 54	mg/kg	
120-12-7	Anthracene	ND	0 54	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0 54	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0 54	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0 54	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0 54	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.54	mg/kg	
218-01-9	Chrysene	ND	0 54	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.54	mg/kg	
206-44-0	Fluoranthene	ND	0 54	mg/kg	
86-73-7	Fluorene	ND	0 54	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 54	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 54	mg/kg	
91-20-3	Naphthalene	ND	0 54	mg/kg	
85-01-8	Phenanthrene	ND	0 54	mg/kg	
129-00-0	Pyrene	ND	0 54	mg/kg	
	C11-C22 Aromatics (Unadj)	ND	21	mg/kg	
	C9-C18 Aliphatics	ND	11	mg/kg	
	C19-C36 Aliphatics	ND	21	mg/kg	
	C11-C22 Aromatics	ND	21	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		40-140%
321-60-8	2-Fluorobiphenyl	82%		40-140%
580-13-2	2-Bromonaphthalene	92%		40-140%
3386-33-2	1-Chlorooctadecane	96%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@13 14 16-Aug-2016

Report of Analysis

Client Sample ID:	MW-105		
Lab Sample ID:	MC47231-1	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
		Percent Solids:	84 1
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0 96	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Arsenic	1.5	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Barium	11 6	4 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0 38	0.38	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0 38	0.38	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Chromium	9 7	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Lead	2 6	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.033	0.033	mg/kg	1	08/10/16	08/11/16	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.5	3 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 0 96	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0 48	0 48	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 0.96	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Vanadium	14 0	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Zinc	25 9	1 9	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch MA19376
(2) Instrument QC Batch MA19378
(3) Prep QC Batch MP26613
(4) Prep QC Batch MP26614

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-106		
Lab Sample ID:	MC47231-2	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	MADEP EPH REV 1 1 SW846 3546	**Percent Solids:**	87 2
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15251 D	1	08/15/16	TA	08/10/16	OP48394	GDE851
Run #2							

	Initial Weight	Final Volume
Run #1	11 8 g	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0 49	mg/kg	
208-96-8	Acenaphthylene	ND	0 49	mg/kg	
120-12-7	Anthracene	ND	0 49	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0 49	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0 49	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0 49	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0 49	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0 49	mg/kg	
218-01-9	Chrysene	ND	0 49	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0 49	mg/kg	
206-44-0	Fluoranthene	ND	0 49	mg/kg	
86-73-7	Fluorene	ND	0 49	mg/kg	
193-39-5	Indeno(1,2,3-ed)pyrene	ND	0.49	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 49	mg/kg	
91-20-3	Naphthalene	ND	0 49	mg/kg	
85-01-8	Phenanthrene	ND	0 49	mg/kg	
129-00-0	Pyrene	ND	0 49	mg/kg	
	C11-C22 Aromaties (Unadj)	ND	19	mg/kg	
	C9-C18 Aliphaties	ND	9 7	mg/kg	
	C19-C36 Aliphaties	ND	19	mg/kg	
	C11-C22 Aromatics	ND	19	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		40-140%
321-60-8	2-Fluorobiphenyl	85%		40-140%
580-13-2	2-Bromonaphthalene	97%		40-140%
3386-33-2	1-Chlorooetadecane	95%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidenee of a compound

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Report of Analysis

Client Sample ID:	MW-106		
Lab Sample ID:	MC47231-2	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
		Percent Solids:	87 2
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.90	0.90	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Arsenic	2.2	0 90	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Barium	22 9	4.5	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.36	0 36	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.36	0 36	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Chromium	13.5	0 90	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Lead	4 1	0 90	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Mereury	< 0.034	0 034	mg/kg	1	08/10/16	08/11/16	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	11.5	3 6	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 0.90	0 90	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.45	0 45	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 0.90	0 90	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Vanadium	18 5	0 90	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Zinc	28 3	1 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch MA19376
(2) Instrument QC Batch MA19378
(3) Prep QC Batch MP26613
(4) Prep QC Batch MP26614

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-107
Lab Sample ID: MC47231-3
Matrix: SO - Soil
Method: MADEP EPH REV 1 1 SW846 3546
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 79 9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15252 D	1	08/16/16	TA	08/10/16	OP48394	GDE851
Run #2							

	Initial Weight	Final Volume
Run #1	11 3 g	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0 55	mg/kg	
208-96-8	Acenaphthylene	ND	0 55	mg/kg	
120-12-7	Anthracene	ND	0 55	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0 55	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0 55	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0 55	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0 55	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0 55	mg/kg	
218-01-9	Chrysene	ND	0 55	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0 55	mg/kg	
206-44-0	Fluoranthene	ND	0 55	mg/kg	
86-73-7	Fluorene	ND	0 55	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 55	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 55	mg/kg	
91-20-3	Naphthalene	ND	0 55	mg/kg	
85-01-8	Phenanthrene	ND	0 55	mg/kg	
129-00-0	Pyrene	ND	0 55	mg/kg	
	C11-C22 Aromatics (Unadj)	ND	22	mg/kg	
	C9-C18 Aliphatics	ND	11	mg/kg	
	C19-C36 Aliphatics	ND	22	mg/kg	
	C11-C22 Aromatics	ND	22	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	99%		40-140%
321-60-8	2-Fluorobiphenyl	96%		40-140%
580-13-2	2-Bromonaphthalene	108%		40-140%
3386-33-2	1-Chlorooctadecane	105%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-107
Lab Sample ID: MC47231-3
Matrix: SO - Soil
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 79 9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0 96	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Arsenic	12 9	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Barium	95 3	4 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0 77	0 38	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0 38	0 38	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Chromium	46 5	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Lead	11 4	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0 035	0 035	mg/kg	1	08/10/16	08/11/16	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	33 5	3 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 0 96	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0 48	0 48	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 0 96	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Vanadium	55 6	0 96	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Zinc	68 5	1 9	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch MA19376
(2) Instrument QC Batch MA19378
(3) Prep QC Batch MP26613
(4) Prep QC Batch MP26614

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-108		
Lab Sample ID:	MC47231-4	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	MADEP EPH REV 1 1 SW846 3546	**Percent Solids:**	79 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15253 D	1	08/16/16	TA	08/10/16	OP48394	GDE851
Run #2							

	Initial Weight	Final Volume
Run #1	11 6 g	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0 54	mg/kg	
208-96-8	Acenaphthylene	ND	0 54	mg/kg	
120-12-7	Anthracene	ND	0 54	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0 54	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0 54	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0 54	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0 54	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0 54	mg/kg	
218-01-9	Chrysene	ND	0 54	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0 54	mg/kg	
206-44-0	Fluoranthene	ND	0 54	mg/kg	
86-73-7	Fluorene	ND	0 54	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 54	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 54	mg/kg	
91-20-3	Naphthalene	ND	0 54	mg/kg	
85-01-8	Phenanthrene	ND	0 54	mg/kg	
129-00-0	Pyrene	ND	0 54	mg/kg	
	C11-C22 Aromatics (Unadj)	ND	22	mg/kg	
	C9-C18 Aliphatics	ND	11	mg/kg	
	C19-C36 Aliphatics	ND	22	mg/kg	
	C11-C22 Aromatics	ND	22	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		40-140%
321-60-8	2-Fluorobiphenyl	89%		40-140%
580-13-2	2-Bromonaphthalene	101%		40-140%
3386-33-2	1-Chlorooctadecane	98%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	MW-108		
Lab Sample ID:	MC47231-4	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
		Percent Solids:	79 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.95	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Arsenic	12 0	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Barium	121	4 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.82	0 38	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.38	0.38	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Chromium	53.5	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Lead	12.8	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.035	0 035	mg/kg	1	08/10/16	08/11/16	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	39.6	3 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 0.95	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.48	0 48	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 0.95	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Vanadium	61 8	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Zinc	78 0	1 9	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch MA19376
(2) Instrument QC Batch MA19378
(3) Prep QC Batch MP26613
(4) Prep QC Batch MP26614

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-103
Lab Sample ID: MC47231-5
Matrix: SO - Soil
Method: MADEP EPH REV 1 1 SW846 3546
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 74 0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15254 D	1	08/16/16	TA	08/10/16	OP48394	GDE851
Run #2							

	Initial Weight	Final Volume
Run #1	11 7 g	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0 58	mg/kg	
208-96-8	Acenaphthylene	ND	0 58	mg/kg	
120-12-7	Anthracene	ND	0 58	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0 58	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0 58	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0 58	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0 58	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0 58	mg/kg	
218-01-9	Chrysene	ND	0 58	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0 58	mg/kg	
206-44-0	Fluoranthene	ND	0 58	mg/kg	
86-73-7	Fluorene	ND	0 58	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 58	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 58	mg/kg	
91-20-3	Naphthalene	ND	0 58	mg/kg	
85-01-8	Phenanthrene	ND	0 58	mg/kg	
129-00-0	Pyrene	ND	0 58	mg/kg	
	C11-C22 Aromatics (Unadj)	ND	23	mg/kg	
	C9-C18 Aliphatics	ND	12	mg/kg	
	C19-C36 Aliphatics	ND	23	mg/kg	
	C11-C22 Aromatics	ND	23	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		40-140%
321-60-8	2-Fluorobiphenyl	91%		40-140%
580-13-2	2-Bromonaphthalene	104%		40-140%
3386-33-2	1-Chlorooctadecane	97%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-103
Lab Sample ID: MC47231-5
Matrix: SO - Soil
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 74 0

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0 99	0 99	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Arsenic	15 9	0 99	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Barium	169	5.0	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Beryllium	1 2	0 40	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Cadmium	< 0.40	0 40	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Chromium	77.2	0 99	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Lead	16.1	0 99	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Mercury	< 0.038	0 038	mg/kg	1	08/10/16	08/11/16	EAL	SW846 7471B [1]	SW846 7471B [5]
Nickel	54.3	4 0	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Selenium [a]	< 2.0	2.0	mg/kg	2	08/10/16	08/12/16	EAL	SW846 6010C [3]	SW846 3050B [4]
Silver [a]	< 0.99	0 99	mg/kg	2	08/10/16	08/12/16	EAL	SW846 6010C [3]	SW846 3050B [4]
Thallium	< 0.99	0 99	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Vanadium	75 2	0 99	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]
Zinc	96 2	2 0	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch MA19376
(2) Instrument QC Batch MA19378
(3) Instrument QC Batch MA19381
(4) Prep QC Batch MP26613
(5) Prep QC Batch MP26614

(a) Elevated RL due to dilution required for matrix interference

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-101		
Lab Sample ID:	MC47231-6	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8260C	**Percent Solids:**	94 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M80311 D	1	08/11/16	KP	n/a	n/a	MSM2873
Run #2							

	Initial Weight	Final Volume
Run #1	5 29 g	5 0 ml
Run #2		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	0.0198	0.010	mg/kg	
71-43-2	Benzene	ND	0 00050	mg/kg	
108-86-1	Bromobenzene	ND	0 0050	mg/kg	
74-97-5	Bromochloromethane	ND	0 0050	mg/kg	
75-27-4	Bromodichloromethane	ND	0 0020	mg/kg	
75-25-2	Bromoform	ND	0 0020	mg/kg	
74-83-9	Bromomethane	ND	0.0020	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.010	mg/kg	
104-51-8	n-Butylbenzene	ND	0 0050	mg/kg	
135-98-8	sec-Butylbenzene	ND	0 0050	mg/kg	
98-06-6	tert-Butylbenzene	ND	0 0050	mg/kg	
75-15-0	Carbon disulfide	ND	0 0050	mg/kg	
56-23-5	Carbon tetrachloride	ND	0 0020	mg/kg	
108-90-7	Chlorobenzene	ND	0 0020	mg/kg	
75-00-3	Chloroethane	ND	0 0050	mg/kg	
67-66-3	Chloroform	ND	0 0020	mg/kg	
74-87-3	Chloromethane [a]	ND	0 0050	mg/kg	
95-49-8	o-Chlorotoluene	ND	0 0050	mg/kg	
106-43-4	p-Chlorotoluene	ND	0 0050	mg/kg	
108-20-3	Di-Isopropyl ether	ND	0 0020	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0 0050	mg/kg	
124-48-1	Dibromochloromethane	ND	0 0020	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0 0020	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0 0020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0 0020	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0 0020	mg/kg	
75-71-8	Dichlorodifluoromethane [a]	ND	0 0020	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0 0020	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0 0020	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0 0020	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0 0020	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0 0020	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-101		
Lab Sample ID:	MC47231-6	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8260C	**Percent Solids:**	94 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0 0020	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0050	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0050	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0050	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0 0020	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0 0020	mg/kg	
123-91-1	1,4-Dioxane	ND	0 13	mg/kg	
60-29-7	Ethyl Ether	ND	0 0050	mg/kg	
100-41-4	Ethylbenzene	ND	0 0020	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0 0050	mg/kg	
591-78-6	2-Hexanone	ND	0 010	mg/kg	
98-82-8	Isopropylbenzene	ND	0 0050	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0 0050	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0 0020	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0 0050	mg/kg	
74-95-3	Methylene bromide	ND	0 0050	mg/kg	
75-09-2	Methylene chloride	ND	0 0020	mg/kg	
91-20-3	Naphthalene	ND	0 0050	mg/kg	
103-65-1	n-Propylbenzene	ND	0 0050	mg/kg	
100-42-5	Styrene	ND	0 0050	mg/kg	
994-05-8	tert-Amyl Methyl Ether	ND	0 0050	mg/kg	
637-92-3	tert-Butyl Ethyl Ether	ND	0 0020	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0 0050	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0 0020	mg/kg	
127-18-4	Tetrachloroethene	ND	0 0020	mg/kg	
109-99-9	Tetrahydrofuran	ND	0 010	mg/kg	
108-88-3	Toluene	ND	0 0050	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0050	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0 0050	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0020	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0 0020	mg/kg	
79-01-6	Trichloroethene	ND	0 0020	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0 0020	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0050	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0 0050	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0 0050	mg/kg	
75-01-4	Vinyl chloride	ND	0.0020	mg/kg	
	m,p-Xylene	ND	0 0020	mg/kg	
95-47-6	o-Xylene	ND	0 0020	mg/kg	
1330-20-7	Xylene (total)	ND	0.0020	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-101		
Lab Sample ID:	MC47231-6	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8260C	**Percent Solids:**	94 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

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VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		65-141%
2037-26-5	Toluene-D8	99%		65-129%
460-00-4	4-Bromofluorobenzene	111%		63-137%

(a) Continuing Calibration outside of acceptance criteria Reporting Limit response verified by low-level standard

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	B-101		
Lab Sample ID:	MC47231-6	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.6

4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R49098 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817
Run #2							

	Initial Weight	Final Volume
Run #1	20 9 g	1 0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid [a]	ND	0 51	mg/kg	
95-57-8	2-Chlorophenol	ND	0 25	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0 51	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0 51	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0 51	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0 51	mg/kg	
95-48-7	2-Methylphenol	ND	0 51	mg/kg	
	3&4-Methylphenol	ND	0 51	mg/kg	
88-75-5	2-Nitrophenol	ND	0 51	mg/kg	
100-02-7	4-Nitrophenol	ND	0 51	mg/kg	
87-86-5	Pentachlorophenol	ND	0 51	mg/kg	
108-95-2	Phenol	ND	0 25	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0 51	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0 51	mg/kg	
83-32-9	Acenaphthene	ND	0 10	mg/kg	
208-96-8	Acenaphthylene	0.112	0 10	mg/kg	
98-86-2	Acetophenone	ND	0 51	mg/kg	
62-53-3	Aniline	ND	0 51	mg/kg	
120-12-7	Anthracene	ND	0 10	mg/kg	
56-55-3	Benzo(a)anthracene	0.613	0 10	mg/kg	
50-32-8	Benzo(a)pyrene	0 893	0 25	mg/kg	
205-99-2	Benzo(b)fluoranthene	0 768	0 10	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0 681	0 10	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.703	0 10	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0 25	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0 25	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0 25	mg/kg	
106-47-8	4-Chloroaniline	ND	0 51	mg/kg	
218-01-9	Chrysene	0.578	0 10	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0 25	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0 25	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0 25	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-101		
Lab Sample ID:	MC47231-6	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

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ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	0 25	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	0 25	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0 25	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0 25	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0 51	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0 51	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0 51	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.166	0 10	mg/kg	
132-64-9	Dibenzofuran	ND	0 10	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0 25	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0 25	mg/kg	
84-66-2	Diethyl phthalate	ND	0 25	mg/kg	
131-11-3	Dimethyl phthalate	ND	0 25	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0 25	mg/kg	
206-44-0	Fluoranthene	0.952	0 10	mg/kg	
86-73-7	Fluorene	ND	0 10	mg/kg	
118-74-1	Hexachlorobenzene	ND	0 25	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0 25	mg/kg	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0 51	mg/kg	
67-72-1	Hexachloroethane	ND	0 25	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.689	0 25	mg/kg	
78-59-1	Isophorone	ND	0 25	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 10	mg/kg	
91-20-3	Naphthalene	ND	0 10	mg/kg	
98-95-3	Nitrobenzene	ND	0 25	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0 25	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0 25	mg/kg	
85-01-8	Phenanthrene	0 273	0 10	mg/kg	
129-00-0	Pyrene	1 10	0 10	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0 25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		25-109%
4165-62-2	Phenol-d5	55%		29-113%
118-79-6	2,4,6-Tribromophenol	77%		20-141%
4165-60-0	Nitrobenzene-d5	50%		27-115%
321-60-8	2-Fluorobiphenyl	60%		34-118%
1718-51-0	Terphenyl-d14	79%		42-139%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-101		
Lab Sample ID:	MC47231-6	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.6 4

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Continuing Calibration outside of acceptance criteria Reporting Limit Response verified by low-level standard

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-101
Lab Sample ID: MC47231-6 **Date Sampled:** 08/08/16
Matrix: SO - Soil **Date Received:** 08/09/16
Method: MADEP VPH REV 1 1 **Percent Solids:** 94 4
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94911 D	1	08/10/16	AF	n/a	n/a	GAB5238
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	14 1 g	16 0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0 31	mg/kg	
100-41-4	Ethylbenzene	ND	0 31	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0 063	mg/kg	
91-20-3	Naphthalene	ND	0 31	mg/kg	
108-88-3	Toluene	ND	0 31	mg/kg	
	m,p-Xylene	ND	0 31	mg/kg	
95-47-6	o-Xylene	ND	0 31	mg/kg	
	C5- C8 Aliphatics (Unadj)	ND	6 3	mg/kg	
	C9- C12 Aliphatics (Unadj)	ND	6 3	mg/kg	
	C9- C10 Aromatics (Unadj)	ND	6 3	mg/kg	
	C5- C8 Aliphatics	ND	6 3	mg/kg	
	C9- C12 Aliphatics	ND	6 3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	98%		70-130%
	2,3,4-Trifluorotoluene	98%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: B-101
Lab Sample ID: MC47231-6 **Date Sampled:** 08/08/16
Matrix: SO - Soil **Date Received:** 08/09/16
Method: SW846 8082A SW846 3546 **Percent Solids:** 94 4
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK60724 D	1	08/13/16	NK	08/10/16	OP48393	GBK1908
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10 0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0 034	mg/kg	
11104-28-2	Aroclor 1221	ND	0 034	mg/kg	
11141-16-5	Aroclor 1232	ND	0 034	mg/kg	
53469-21-9	Aroclor 1242	ND	0 034	mg/kg	
12672-29-6	Aroclor 1248	ND	0 034	mg/kg	
11097-69-1	Aroclor 1254	ND	0 034	mg/kg	
11096-82-5	Aroclor 1260	ND	0 034	mg/kg	
37324-23-5	Aroclor 1262	ND	0 034	mg/kg	
11100-14-4	Aroclor 1268	ND	0 034	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		25-145%
877-09-8	Tetrachloro-m-xylene	105%		25-145%
2051-24-3	Decachlorobiphenyl	99%		25-179%
2051-24-3	Decachlorobiphenyl	126%		25-179%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

4.6 4

Report of Analysis

Client Sample ID:	B-101		
Lab Sample ID:	MC47231-6	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	MADEP EPH REV 1 1 SW846 3546	**Percent Solids:**	94 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15255 D	1	08/16/16	TA	08/10/16	OP48394	GDE851
Run #2							

	Initial Weight	Final Volume
Run #1	11 4 g	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0 46	mg/kg	
208-96-8	Acenaphthylene	ND	0 46	mg/kg	
120-12-7	Anthracene	ND	0 46	mg/kg	
56-55-3	Benzo(a)anthracene	0 845	0 46	mg/kg	
50-32-8	Benzo(a)pyrene	1.33	0 46	mg/kg	
205-99-2	Benzo(b)fluoranthene	2.24	0 46	mg/kg	
191-24-2	Benzo(g,h,i)perylene	1 02	0 46	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0 46	mg/kg	
218-01-9	Chrysene	0 747	0 46	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0 46	mg/kg	
206-44-0	Fluoranthene	1 05	0 46	mg/kg	
86-73-7	Fluorene	ND	0 46	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 46	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 46	mg/kg	
91-20-3	Naphthalene	ND	0 46	mg/kg	
85-01-8	Phenanthrene	ND	0 46	mg/kg	
129-00-0	Pyrene	1 05	0 46	mg/kg	
	C11-C22 Aromatics (Unadj)	35 9	19	mg/kg	
	C9-C18 Aliphatics	ND	9 3	mg/kg	
	C19-C36 Aliphatics	ND	19	mg/kg	
	C11-C22 Aromatics	26 7	19	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	116%		40-140%
321-60-8	2-Fluorobiphenyl	112%		40-140%
580-13-2	2-Bromonaphthalene	127%		40-140%
3386-33-2	1-Chlorooctadecane	90%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	B-101		
Lab Sample ID:	MC47231-6	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
		Percent Solids:	94 4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0 88	0 88	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Arsenic	5 7	0 88	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Barium	21 8	4 4	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.35	0 35	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.35	0 35	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Chromium	12.9	0 88	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Lead	9 1	0 88	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.033	0 033	mg/kg	1	08/10/16	08/11/16	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.7	3 5	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 0.88	0.88	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.44	0 44	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 0.88	0 88	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Vanadium	18 8	0 88	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Zinc	25 9	1 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch MA19376
(2) Instrument QC Batch MA19378
(3) Prep QC Batch MP26613
(4) Prep QC Batch MP26614

RL = Reporting Limit

Report of Analysis

4.6

4

Client Sample ID: B-101
Lab Sample ID: MC47231-6
Matrix: SO - Soil
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 94 4

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide Reactivity	< 1 6	1 6	mg/kg	1	08/12/16 11 25	BF	SW846 CHAP7
Ignitability (Flashpoint)	> 230		Deg F	1	08/11/16	BF	SW846 1020
Solids, Percent	94 4		%	1	08/10/16	VY	SM 2540G-97 MOD
Specific Conductivity	160	0 50	umhos/cm	1	08/15/16	EL	EPA 120 1M
Sulfide Reactivity	< 53	53	mg/kg	1	08/12/16	BF	SW846 CHAP7
pH	7 1		su	1	08/11/16 12 25	EL	SW846 9045D

RL = Reporting Limit

Report of Analysis

4.7

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Client Sample ID: B-102
Lab Sample ID: MC47231-7
Matrix: SO - Soil
Method: SW846 8260C
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 80 0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M80312 D	1	08/11/16	KP	n/a	n/a	MSM2873
Run #2							

	Initial Weight	Final Volume
Run #1	5 16 g	5 0 ml
Run #2		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	0 012	mg/kg	
71-43-2	Benzene	0.0013	0 00061	mg/kg	
108-86-1	Bromobenzene	ND	0 0061	mg/kg	
74-97-5	Bromochloromethane	ND	0 0061	mg/kg	
75-27-4	Bromodichloromethane	ND	0 0024	mg/kg	
75-25-2	Bromoform	ND	0 0024	mg/kg	
74-83-9	Bromomethane	ND	0 0024	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0 012	mg/kg	
104-51-8	n-Butylbenzene	ND	0 0061	mg/kg	
135-98-8	sec-Butylbenzene	ND	0 0061	mg/kg	
98-06-6	tert-Butylbenzene	ND	0 0061	mg/kg	
75-15-0	Carbon disulfide	ND	0 0061	mg/kg	
56-23-5	Carbon tetrachloride	ND	0 0024	mg/kg	
108-90-7	Chlorobenzene	ND	0 0024	mg/kg	
75-00-3	Chloroethane	ND	0 0061	mg/kg	
67-66-3	Chloroform	ND	0 0024	mg/kg	
74-87-3	Chloromethane [a]	ND	0 0061	mg/kg	
95-49-8	o-Chlorotoluene	ND	0 0061	mg/kg	
106-43-4	p-Chlorotoluene	ND	0 0061	mg/kg	
108-20-3	Di-Isopropyl ether	ND	0 0024	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0 0061	mg/kg	
124-48-1	Dibromochloromethane	ND	0 0024	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0 0024	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0 0024	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0 0024	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0 0024	mg/kg	
75-71-8	Dichlorodifluoromethane [a]	ND	0 0024	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0 0024	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0 0024	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0 0024	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0 0024	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0 0024	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-102		
Lab Sample ID:	MC47231-7	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8260C	**Percent Solids:**	80 0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

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VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0 0024	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0 0061	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0 0061	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0 0061	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0 0024	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0 0024	mg/kg	
123-91-1	1,4-Dioxane	ND	0 15	mg/kg	
60-29-7	Ethyl Ether	ND	0 0061	mg/kg	
100-41-4	Ethylbenzene	ND	0 0024	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0 0061	mg/kg	
591-78-6	2-Hexanone	ND	0 012	mg/kg	
98-82-8	Isopropylbenzene	ND	0 0061	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0 0061	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0 0024	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0 0061	mg/kg	
74-95-3	Methylene bromide	ND	0 0061	mg/kg	
75-09-2	Methylene chloride	ND	0 0024	mg/kg	
91-20-3	Naphthalene	ND	0 0061	mg/kg	
103-65-1	n-Propylbenzene	ND	0 0061	mg/kg	
100-42-5	Styrene	ND	0 0061	mg/kg	
994-05-8	tert-Amyl Methyl Ether	ND	0 0061	mg/kg	
637-92-3	tert-Butyl Ethyl Ether	ND	0 0024	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0 0061	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0 0024	mg/kg	
127-18-4	Tetrachloroethene	ND	0 0024	mg/kg	
109-99-9	Tetrahydrofuran	ND	0 012	mg/kg	
108-88-3	Toluene	ND	0 0061	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0 0061	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0 0061	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0 0024	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0 0024	mg/kg	
79-01-6	Trichloroethene	ND	0 0024	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0 0024	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0 0061	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0 0061	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0 0061	mg/kg	
75-01-4	Vinyl chloride	ND	0 0024	mg/kg	
	m,p-Xylene	ND	0 0024	mg/kg	
95-47-6	o-Xylene	ND	0 0024	mg/kg	
1330-20-7	Xylene (total)	ND	0 0024	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-102		
Lab Sample ID:	MC47231-7	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8260C	**Percent Solids:**	80 0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

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VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		65-141%
2037-26-5	Toluene-D8	99%		65-129%
460-00-4	4-Bromofluorobenzene	103%		63-137%

(a) Continuing Calibration outside of acceptance criteria Reporting Limit response verified by low-level standard

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-102		
Lab Sample ID:	MC47231-7	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	80 0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R49099 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817
Run #2							

	Initial Weight	Final Volume
Run #1	20 1 g	1 0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid [a]	ND	0 62	mg/kg	
95-57-8	2-Chlorophenol	ND	0 31	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0 62	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0 62	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0 62	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0 62	mg/kg	
95-48-7	2-Methylphenol	ND	0 62	mg/kg	
	3&4-Methylphenol	ND	0 62	mg/kg	
88-75-5	2-Nitrophenol	ND	0 62	mg/kg	
100-02-7	4-Nitrophenol	ND	0 62	mg/kg	
87-86-5	Pentachlorophenol	ND	0 62	mg/kg	
108-95-2	Phenol	ND	0 31	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0 62	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0 62	mg/kg	
83-32-9	Acenaphthene	ND	0 12	mg/kg	
208-96-8	Acenaphthylene	0.258	0 12	mg/kg	
98-86-2	Acetophenone	ND	0 62	mg/kg	
62-53-3	Aniline	ND	0 62	mg/kg	
120-12-7	Anthracene	0 358	0 12	mg/kg	
56-55-3	Benzo(a)anthracene	1 98	0 12	mg/kg	
50-32-8	Benzo(a)pyrene	1.64	0 31	mg/kg	
205-99-2	Benzo(b)fluoranthene	1 50	0 12	mg/kg	
191-24-2	Benzo(g,h,i)perylene	1 08	0 12	mg/kg	
207-08-9	Benzo(k)fluoranthene	1.56	0 12	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0 31	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0 31	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0 31	mg/kg	
106-47-8	4-Chloroaniline	ND	0 62	mg/kg	
218-01-9	Chrysene	1 89	0 12	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0 31	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0 31	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0 31	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	B-102		
Lab Sample ID:	MC47231-7	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	80 0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	0 31	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	0 31	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0 31	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0 31	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0 62	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0 62	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0 62	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0 299	0 12	mg/kg	
132-64-9	Dibenzofuran	ND	0 12	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0 31	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0 31	mg/kg	
84-66-2	Diethyl phthalate	ND	0 31	mg/kg	
131-11-3	Dimethyl phthalate	ND	0 31	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0 31	mg/kg	
206-44-0	Fluoranthene	3 55	0 12	mg/kg	
86-73-7	Fluorene	ND	0 12	mg/kg	
118-74-1	Hexachlorobenzene	ND	0 31	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0 31	mg/kg	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0 62	mg/kg	
67-72-1	Hexachloroethane	ND	0 31	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1 10	0 31	mg/kg	
78-59-1	Isophorone	ND	0 31	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 12	mg/kg	
91-20-3	Naphthalene	ND	0 12	mg/kg	
98-95-3	Nitrobenzene	ND	0 31	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0 31	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0 31	mg/kg	
85-01-8	Phenanthrene	1.27	0 12	mg/kg	
129-00-0	Pyrene	3.51	0 12	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0 31	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		25-109%
4165-62-2	Phenol-d5	50%		29-113%
118-79-6	2,4,6-Tribromophenol	61%		20-141%
4165-60-0	Nitrobenzene-d5	43%		27-115%
321-60-8	2-Fluorobiphenyl	55%		34-118%
1718-51-0	Terphenyl-d14	77%		42-139%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-102		
Lab Sample ID:	MC47231-7	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	80 0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Continuing Calibration outside of acceptance criteria Reporting Limit Response verified by low-level standard

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-102		
Lab Sample ID:	MC47231-7	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	MADEP VPH REV 1 1	**Percent Solids:**	80 0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94912 D	1	08/10/16	AF	n/a	n/a	GAB5238
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	13 5 g	16 0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0 43	mg/kg	
100-41-4	Ethylbenzene	ND	0 43	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0 086	mg/kg	
91-20-3	Naphthalene	ND	0 43	mg/kg	
108-88-3	Toluene	ND	0 43	mg/kg	
	m,p-Xylene	ND	0 43	mg/kg	
95-47-6	o-Xylene	ND	0 43	mg/kg	
	C5- C8 Aliphatics (Unadj)	ND	8 6	mg/kg	
	C9- C12 Aliphatics (Unadj)	ND	8 6	mg/kg	
	C9- C10 Aromatics (Unadj)	ND	8 6	mg/kg	
	C5- C8 Aliphatics	ND	8 6	mg/kg	
	C9- C12 Aliphatics	ND	8 6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	106%		70-130%
	2,3,4-Trifluorotoluene	106%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-102
Lab Sample ID: MC47231-7
Matrix: SO - Soil
Method: SW846 8082A SW846 3546
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 80 0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK60725 D	1	08/13/16	NK	08/10/16	OP48393	GBK1908
Run #2							

	Initial Weight	Final Volume
Run #1	15 6 g	10 0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0 040	mg/kg	
11104-28-2	Aroclor 1221	ND	0 040	mg/kg	
11141-16-5	Aroclor 1232	ND	0 040	mg/kg	
53469-21-9	Aroclor 1242	ND	0 040	mg/kg	
12672-29-6	Aroclor 1248	ND	0 040	mg/kg	
11097-69-1	Aroclor 1254	ND	0 040	mg/kg	
11096-82-5	Aroclor 1260	ND	0.040	mg/kg	
37324-23-5	Aroclor 1262	ND	0.040	mg/kg	
11100-14-4	Aroclor 1268	ND	0 040	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		25-145%
877-09-8	Tetrachloro-m-xylene	89%		25-145%
2051-24-3	Decachlorobiphenyl	96%		25-179%
2051-24-3	Decachlorobiphenyl	115%		25-179%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: B-102
Lab Sample ID: MC47231-7
Matrix: SO - Soil
Method: MADEP EP11 REV 1 1 SW846 3546
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 80 0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15256 D	1	08/16/16	TA	08/10/16	OP48394	GDE851
Run #2							

	Initial Weight	Final Volume
Run #1	11 0 g	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0 57	mg/kg	
208-96-8	Acenaphthylene	ND	0 57	mg/kg	
120-12-7	Anthracene	ND	0 57	mg/kg	
56-55-3	Benzo(a)anthracene	1.21	0 57	mg/kg	
50-32-8	Benzo(a)pyrene	0.997	0 57	mg/kg	
205-99-2	Benzo(b)fluoranthene	1 93	0 57	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.609	0 57	mg/kg	
207-08-9	Benzo(k)fluoranthene	1.64	0 57	mg/kg	
218-01-9	Chrysene	1.07	0 57	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0 57	mg/kg	
206-44-0	Fluoranthene	1 74	0 57	mg/kg	
86-73-7	Fluorene	ND	0 57	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 57	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 57	mg/kg	
91-20-3	Naphthalene	ND	0 57	mg/kg	
85-01-8	Phenanthrene	0 615	0 57	mg/kg	
129-00-0	Pyrene	1 46	0 57	mg/kg	
	C11-C22 Aromatics (Unadj)	34 8	23	mg/kg	
	C9-C18 Aliphatics	ND	11	mg/kg	
	C19-C36 Aliphatics	ND	23	mg/kg	
	C11-C22 Aromatics	ND	23	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	103%		40-140%
321-60-8	2-Fluorobiphenyl	94%		40-140%
580-13-2	2-Bromonaphthalene	108%		40-140%
3386-33-2	1-Chlorooctadecane	101%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-102		
Lab Sample ID:	MC47231-7	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
		Percent Solids:	80 0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0 95	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Arsenic	13 5	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Barium	195	4 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0 87	0 38	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Cadmium	0 48	0 38	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Chromium	40 4	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Lead	431	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Mercury	3 0	0 20	mg/kg	5	08/10/16	08/11/16	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	30 0	3 8	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 0 95	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.48	0 48	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 0.95	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Vanadium	50 0	0 95	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Zinc	245	1 9	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch MA19376
(2) Instrument QC Batch MA19378
(3) Prep QC Batch MP26613
(4) Prep QC Batch MP26614

RL - Reporting Limit

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Report of Analysis

Client Sample ID:	B-102		
Lab Sample ID:	MC47231-7	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
		Percent Solids:	80 0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

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General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide Reactivity	< 1.9	1.9	mg/kg	1	08/12/16 11 25	BF	SW846 CHAP7
Ignitability (Flashpoint)	> 230		Deg F	1	08/11/16	BF	SW846 1020
Solids, Percent	80		%	1	08/10/16	VY	SM 2540G-97 MOD
Specific Conductivity	376	0 50	umhos/cm	1	08/15/16	EL	EPA 120 1M
Sulfide Reactivity	< 62	62	mg/kg	1	08/12/16	BF	SW846 CHAP7
pH	10.0		su	1	08/11/16 12 25	EL	SW846 9045D

RL - Reporting Limit

Report of Analysis

Client Sample ID:	B-104		
Lab Sample ID:	MC47231-8	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8260C	**Percent Solids:**	97 6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M80313 D	1	08/11/16	KP	n/a	n/a	MSM2873
Run #2							

	Initial Weight	Final Volume
Run #1	6 06 g	5 0 ml
Run #2		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	0 0198	0 0085	mg/kg	
71-43-2	Benzene	ND	0 00042	mg/kg	
108-86-1	Bromobenzene	ND	0 0042	mg/kg	
74-97-5	Bromochloromethane	ND	0 0042	mg/kg	
75-27-4	Bromodichloromethane	ND	0 0017	mg/kg	
75-25-2	Bromoform	ND	0 0017	mg/kg	
74-83-9	Bromomethane	ND	0 0017	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0 0085	mg/kg	
104-51-8	n-Butylbenzene	ND	0 0042	mg/kg	
135-98-8	sec-Butylbenzene	ND	0 0042	mg/kg	
98-06-6	tert-Butylbenzene	ND	0 0042	mg/kg	
75-15-0	Carbon disulfide	ND	0 0042	mg/kg	
56-23-5	Carbon tetrachloride	ND	0 0017	mg/kg	
108-90-7	Chlorobenzene	ND	0 0017	mg/kg	
75-00-3	Chloroethane	ND	0 0042	mg/kg	
67-66-3	Chloroform	ND	0 0017	mg/kg	
74-87-3	Chloromethane [a]	ND	0 0042	mg/kg	
95-49-8	o-Chlorotoluene	ND	0 0042	mg/kg	
106-43-4	p-Chlorotoluene	ND	0 0042	mg/kg	
108-20-3	Di-Isopropyl ether	ND	0 0017	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0 0042	mg/kg	
124-48-1	Dibromochloromethane	ND	0 0017	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0 0017	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0 0017	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0 0017	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0 0017	mg/kg	
75-71-8	Dichlorodifluoromethane [a]	ND	0 0017	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0 0017	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0 0017	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0 0017	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0 0017	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0 0017	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-104		
Lab Sample ID:	MC47231-8	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8260C	**Percent Solids:**	97 6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0 0017	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0 0042	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0 0042	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0 0042	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0 0017	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0 0017	mg/kg	
123-91-1	1,4-Dioxane	ND	0 11	mg/kg	
60-29-7	Ethyl Ether	ND	0 0042	mg/kg	
100-41-4	Ethylbenzene	ND	0 0017	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0 0042	mg/kg	
591-78-6	2-Hexanone	ND	0 0085	mg/kg	
98-82-8	Isopropylbenzene	ND	0 0042	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0 0042	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0 0017	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0 0042	mg/kg	
74-95-3	Methylene bromide	ND	0 0042	mg/kg	
75-09-2	Methylene chloride	ND	0 0017	mg/kg	
91-20-3	Naphthalene	ND	0 0042	mg/kg	
103-65-1	n-Propylbenzene	ND	0 0042	mg/kg	
100-42-5	Styrene	ND	0 0042	mg/kg	
994-05-8	tert-Amyl Methyl Ether	ND	0 0042	mg/kg	
637-92-3	tert-Butyl Ethyl Ether	ND	0 0017	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0 0042	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0 0017	mg/kg	
127-18-4	Tetrachloroethene	ND	0 0017	mg/kg	
109-99-9	Tetrahydrofuran	ND	0 0085	mg/kg	
108-88-3	Toluene	ND	0 0042	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0 0042	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0 0042	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0 0017	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0 0017	mg/kg	
79-01-6	Trichloroethene	ND	0 0017	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0 0017	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0 0042	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0 0042	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0 0042	mg/kg	
75-01-4	Vinyl chloride	ND	0 0017	mg/kg	
	m,p-Xylene	ND	0 0017	mg/kg	
95-47-6	o-Xylene	ND	0 0017	mg/kg	
1330-20-7	Xylene (total)	ND	0 0017	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-104		
Lab Sample ID:	MC47231-8	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8260C	**Percent Solids:**	97 6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

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VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		65-141%
2037-26-5	Toluene-D8	99%		65-129%
460-00-4	4-Bromofluorobenzene	102%		63-137%

(a) Continuing Calibration outside of acceptance criteria Reporting Limit response verified by low-level standard

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	B-104		
Lab Sample ID:	MC47231-8	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	97 6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.8 4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R49100 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817
Run #2							

	Initial Weight	Final Volume
Run #1	20 2 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid [a]	ND	0 51	mg/kg	
95-57-8	2-Chlorophenol	ND	0 25	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0 51	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0 51	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0 51	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0 51	mg/kg	
95-48-7	2-Methylphenol	ND	0 51	mg/kg	
	3&4-Methylphenol	ND	0 51	mg/kg	
88-75-5	2-Nitrophenol	ND	0 51	mg/kg	
100-02-7	4-Nitrophenol	ND	0 51	mg/kg	
87-86-5	Pentachlorophenol	ND	0 51	mg/kg	
108-95-2	Phenol	ND	0 25	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0 51	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0 51	mg/kg	
83-32-9	Acenaphthene	0 219	0 10	mg/kg	
208-96-8	Acenaphthylene	0 171	0 10	mg/kg	
98-86-2	Acetophenone	ND	0 51	mg/kg	
62-53-3	Aniline	ND	0 51	mg/kg	
120-12-7	Anthracene	0 828	0 10	mg/kg	
56-55-3	Benzo(a)anthracene	2 25	0 10	mg/kg	
50-32-8	Benzo(a)pyrene	1.86	0 25	mg/kg	
205-99-2	Benzo(b)fluoranthene	1.70	0 10	mg/kg	
191-24-2	Benzo(g,h,i)perylene	1.07	0 10	mg/kg	
207-08-9	Benzo(k)fluoranthene	1.59	0 10	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0 25	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0 25	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0 25	mg/kg	
106-47-8	4-Chloroaniline	ND	0 51	mg/kg	
218-01-9	Chrysene	2.10	0 10	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0 25	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0 25	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0 25	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-104		
Lab Sample ID:	MC47231-8	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	97 6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	0 25	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	0 25	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0 25	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0 25	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0 51	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0 51	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0 51	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0 304	0 10	mg/kg	
132-64-9	Dibenzofuran	0 188	0 10	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0 25	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0 25	mg/kg	
84-66-2	Diethyl phthalate	ND	0 25	mg/kg	
131-11-3	Dimethyl phthalate	ND	0 25	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0 25	mg/kg	
206-44-0	Fluoranthene	5.69	0 10	mg/kg	
86-73-7	Fluorene	0 230	0 10	mg/kg	
118-74-1	Hexachlorobenzene	ND	0 25	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0 25	mg/kg	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0 51	mg/kg	
67-72-1	Hexachloroethane	ND	0 25	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1 12	0 25	mg/kg	
78-59-1	Isophorone	ND	0 25	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 10	mg/kg	
91-20-3	Naphthalene	0.209	0 10	mg/kg	
98-95-3	Nitrobenzene	ND	0 25	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0 25	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0 25	mg/kg	
85-01-8	Phenanthrene	3 43	0 10	mg/kg	
129-00-0	Pyrene	5 40	0 10	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0 25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		25-109%
4165-62-2	Phenol-d5	50%		29-113%
118-79-6	2,4,6-Tribromophenol	56%		20-141%
4165-60-0	Nitrobenzene-d5	42%		27-115%
321-60-8	2-Fluorobiphenyl	54%		34-118%
1718-51-0	Terphenyl-d14	73%		42-139%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	B-104		
Lab Sample ID:	MC47231-8	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	97 6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Continuing Calibration outside of acceptance criteria Reporting Limit Response verified by low-level standard

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-104		
Lab Sample ID:	MC47231-8	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	MADEP VPH REV 1 1	**Percent Solids:**	97.6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94913 D	1	08/10/16	AF	n/a	n/a	GAB5238
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	16 6 g	16 0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0 25	mg/kg	
100-41-4	Ethylbenzene	ND	0 25	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0 050	mg/kg	
91-20-3	Naphthalene	ND	0 25	mg/kg	
108-88-3	Toluene	ND	0 25	mg/kg	
	m,p-Xylene	ND	0 25	mg/kg	
95-47-6	o-Xylene	ND	0 25	mg/kg	
	C5- C8 Aliphatics (Unadj)	ND	5 0	mg/kg	
	C9- C12 Aliphatics (Unadj)	ND	5 0	mg/kg	
	C9- C10 Aromatics (Unadj)	ND	5 0	mg/kg	
	C5- C8 Aliphatics	ND	5 0	mg/kg	
	C9- C12 Aliphatics	ND	5 0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	95%		70-130%
	2,3,4-Trifluorotoluene	95%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	B-104		
Lab Sample ID:	MC47231-8	**Date Sampled:**	08/08/16
Matrix:	SO - Soil	**Date Received:**	08/09/16
Method:	SW846 8082A SW846 3546	**Percent Solids:**	97 6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK60726 D	1	08/13/16	NK	08/10/16	OP48393	GBK1908
Run #2							

	Initial Weight	Final Volume
Run #1	15 6 g	10 0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0 033	mg/kg	
11104-28-2	Aroclor 1221	ND	0 033	mg/kg	
11141-16-5	Aroclor 1232	ND	0 033	mg/kg	
53469-21-9	Aroclor 1242	ND	0 033	mg/kg	
12672-29-6	Aroclor 1248	ND	0 033	mg/kg	
11097-69-1	Aroclor 1254	ND	0 033	mg/kg	
11096-82-5	Aroclor 1260	ND	0 033	mg/kg	
37324-23-5	Aroclor 1262	ND	0 033	mg/kg	
11100-14-4	Aroclor 1268	ND	0 033	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		25-145%
877-09-8	Tetrachloro-m-xylene	85%		25-145%
2051-24-3	Decachlorobiphenyl	102%		25-179%
2051-24-3	Decachlorobiphenyl	134%		25-179%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-104
Lab Sample ID: MC47231-8
Matrix: SO - Soil
Method: MADEP EPH REV 1 1 SW846 3546
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 97 6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15257 D	1	08/16/16	TA	08/10/16	OP48394	GDE851
Run #2							

	Initial Weight	Final Volume
Run #1	11 2 g	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	0 464	0 46	mg/kg	
208-96-8	Acenaphthylene	ND	0 46	mg/kg	
120-12-7	Anthracene	1.09	0 46	mg/kg	
56-55-3	Benzo(a)anthracene	3 08	0 46	mg/kg	
50-32-8	Benzo(a)pyrene	2 65	0 46	mg/kg	
205-99-2	Benzo(b)fluoranthene	4 74	0 46	mg/kg	
191-24-2	Benzo(g,h,i)perylene	1 49	0 46	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0 46	mg/kg	
218-01-9	Chrysene	2 69	0 46	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0 46	mg/kg	
206-44-0	Fluoranthene	6 57	0 46	mg/kg	
86-73-7	Fluorene	ND	0 46	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 46	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0 46	mg/kg	
91-20-3	Naphthalene	ND	0 46	mg/kg	
85-01-8	Phenanthrene	4 17	0 46	mg/kg	
129-00-0	Pyrene	5.08	0 46	mg/kg	
	C11-C22 Aromatics (Unadj)	96 8	18	mg/kg	
	C9-C18 Aliphatics	ND	9 2	mg/kg	
	C19-C36 Aliphatics	21.4	18	mg/kg	
	C11-C22 Aromatics	63 3	18	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	135%		40-140%
321-60-8	2-Fluorobiphenyl	99%		40-140%
580-13-2	2-Bromonaphthalene	101%		40-140%
3386-33-2	1-Chlorooctadecane	94%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-104
Lab Sample ID: MC47231-8
Matrix: SO - Soil
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 97 6

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0 83	0 83	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Arsenic	5.9	0 83	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Barium	20.7	4 1	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0 33	0 33	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.33	0 33	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Chromium	9.9	0 83	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Lead	28.3	0 83	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0 031	0 031	mg/kg	1	08/10/16	08/11/16	EAL	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.8	3 3	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 0.83	0 83	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.41	0 41	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 0 83	0 83	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Vanadium	14 5	0 83	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]
Zinc	35 4	1 7	mg/kg	1	08/10/16	08/11/16	EAL	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch MA19376
(2) Instrument QC Batch MA19378
(3) Prep QC Batch MP26613
(4) Prep QC Batch MP26614

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-104
Lab Sample ID: MC47231-8
Matrix: SO - Soil
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/08/16
Date Received: 08/09/16
Percent Solids: 97 6

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide Reactivity	< 1 5	1 5	mg/kg	1	08/12/16 11 25	BF	SW846 CHAP7
Ignitability (Flashpoint)	> 230		Deg F	1	08/11/16	BF	SW846 1020
Solids, Percent	97 6		%	1	08/10/16	VY	SM 2540G-97 MOD
Specific Conductivity	255	0 50	umhos/cm	1	08/15/16	EL	EPA 120 1M
Sulfide Reactivity	< 51	51	mg/kg	1	08/12/16	BF	SW846 CHAP7
pH	8 6		su	1	08/11/16 12 25	EL	SW846 9045D

RL Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- EPH Form
- VPH Form
- Sample Tracking Chronicle
- QC Evaluation MA MCP Limits

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest of New England
10 D'Angelo Drive, Building One Marlborough, MA 01752
TEL 508-481-6200 FAX 508-481-7753
www.accutest.com

PAGE 1 OF 1

MC47231

Client / Reporting Information

Company Name: EnviroTrac Ltd
Street Address: 2 Maynard St.
City: Sharon State: MA Zip: 02067
Project Contact: Craig Blake Craig@envirotrac.com
Phone #: (781) 793-0074 Fax #:
Sampler(s) Name(s): L. Mann / F Morrissey

Project Information

Project Name: Maggiore Somerville
Street: 343-351 Somerville St.
City: Somerville State: MA
Project #: 03 99 0202 OC
Client PO#:
Project Manager: Craig Blake

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention: PO#:

Requested Analysis (see TEST CODE sheet)

Field ID / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	EPH	MCP 14 Metals	SVOCs 8270	Specific Conductivity	PH and Reactivity	Flash point	VPH	VOCs by 8260	PCB
MW-105	8/8/16	8:50	LM	SO	1	X	X							
MW-106		9:20			1	X	X							
MW-107		10:55			1	X	X							
MW-108		3:05			1	X	X							
B-103		12:57			1	X	X							
B-101		4:50-16:00			6	2	2	2	X	X	X	X	X	X
~~B-100~~ B-102		11:30-14:00			6	2	2	2	X	X	X	X	X	X
B-104		2:00-2:10			6	2	2	2	X	X	X	X	X	X

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1 OF 5

Turnaround Time (Business days)
- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 8 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Labnet

Approved By (SGS Accutest PM) / Date:

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULL T1 (Level 3+4)
- [ ] CT RCP
- [x] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

INITIAL ASSESSMENT WA
LABEL VERIFICATION WM

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1	8/8/2016 8:30pm	1 ET Secure Fridge	2	8/9/16 1640	2
3	8/9/16 1580	3	4		4
5		5	Custody Seal #	Intact / Not Intact	On Ice / Cooler Temp 1.6°c

5.1 5

SGS Accutest Sample Receipt Summary

Job Number: MC47231 Client: ENVIROTRAC Project: MAGGIORE SOMERVILLE

Date / Time Received: 8/9/2016 3 50 00 PM Delivery Method: SGS Courier Airbill #'s:

Cooler Temps (Initial/Adjusted): #1 (1.6/1.6).

Cooler Security	Y	or	N		Y	or	N
1 Custody Seals Present	☐		☑	3 COC Present	☑		☐
2 Custody Seals Intact	☐		☑	4 Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1 Temp criteria achieved	☑		☐
2 Thermometer ID	IRGUN1		
3 Cooler media	Ice (Bag)		
4 No Coolers	1		

Quality Control Preservation	Y	or	N	N/A
1 Trip Blank present / cooler	☐		☑	☐
2 Trip Blank listed on COC	☐		☑	☐
3 Samples preserved properly	☑		☐	
4 VOCs headspace free	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1 Sample labels present on bottles	☑		☐
2 Container labeling complete	☑		☐
3 Sample container label / COC agree	☑		☐

Sample Integrity - Condition	Y	or	N
1 Sample recvd within HT	☑		☐
2 All containers accounted for	☑		☐
3 Condition of sample	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1 Analysis requested is clear	☑		☐	
2 Bottles received for unspecified tests	☐		☑	
3 Sufficient volume recvd for analysis	☑		☐	
4 Compositing instructions clear	☐		☐	☑
5 Filtering instructions clear	☐		☐	☑

Comments

5.1 5

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	WSC-CAM	Exhibit VII A
	July 1, 2010	Revision No 1
	Final	

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name	Accutest Laboratories of New England	Project #	MC47231
Project Location	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set list Laboratory Sample ID Numbers(s)
MC47231-1,MC47231-2,MC47231-3,MC47231-4,MC47231-5,MC47231-6,MC47231-7,MC47231-8

Matrices Groundwater/Surface Water ( ) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below)

8260 VOC (X) CAM II A	7470/7471 Hg (X) CAM III B	MassDEP VPH (X) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC (X) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH (X) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB (X) CAM V A	9014 Total ( ) Cyanide/PAC CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status"

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No	
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No	
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No	
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No	
E	VPH, EPH, APH, and TO-15 only a VPH, EPH, and APH Methods only Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications) b APH and TO-15 Methods only Was the complete analyte list reported for each method?	☑ Yes ☑ Yes	☐ No ☐ No	
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No	

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☐ Yes	☑ No [1]	
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.			
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No [1]	
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes	☐ No [1]	

All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 16-Aug-16

5.2

5

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1 6 Deg C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1 1	Client ID:	MW-105	Lab ID:	MC47231-1
Method for Targets:	MADEP EPH REV 1 1	Date Collected:	8/8/2016	Date Received:	8/9/2016
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane Aromatic o-Terphenyl	Date Extracted:	First Date Run:	Last Date Run:	
		8/10/2016 9 00 00 PM	8/15/2016		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl 2-Bromonaphthalene	% Solids:	Low Dilution:	High Dilution:	
		84 1	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj)		mg/kg	ND [A]	21	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0 54	
Phenanthrene	85-01-8	mg/kg	ND	0 54	
Acenaphthene	83-32-9	mg/kg	ND	0 54	
Naphthalene	91-20-3	mg/kg	ND	0 54	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0 54	
Anthracene	120-12-7	mg/kg	ND	0 54	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0 54	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0 54	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0 54	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0 54	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0 54	
Chrysene	218-01-9	mg/kg	ND	0 54	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0 54	
Fluoranthene	206-44-0	mg/kg	ND	0 54	
Fluorene	86-73-7	mg/kg	ND	0 54	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0 54	
Pyrene	129-00-0	mg/kg	ND	0 54	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND [A]	11	
C19-C36 Aliphatics		mg/kg	ND [A]	21	
C11-C22 Aromatics		mg/kg	ND [C]	21	

Surrogate Recoveries			Acceptence Range
1-Chlorooctadecane	%	96	40-140 %
o-Terphenyl	%	88	40-140 %
2-Fluorobiphenyl	%	82	40-140 %
2-Bromonaphthalene	%	92	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attached
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attached
Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

5.3

5

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.6 Deg. C			
Extraction Method	SW646 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID:	MW-106	Lab ID:	MC47231-2
Method for Targets:	MADEP EPH REV 1.1	Date Collected:	8/8/2016	Date Received:	8/9/2016
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	8/10/2016 9:00:00 PM	8/15/2016		N/A
EPH Fractionation Surrogate Standards	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
	2-Bromonaphthalene	87.2	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	ND A	19	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.49	
Phenanthrene	85-01-8	mg/kg	ND	0.49	
Acenaphthene	83-32-9	mg/kg	ND	0.49	
Naphthalene	91-20-3	mg/kg	ND	0.49	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.49	
Anthracene	120-12-7	mg/kg	ND	0.49	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.49	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.49	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.49	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.49	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.49	
Chrysene	218-01-9	mg/kg	ND	0.49	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.49	
Fluoranthene	206-44-0	mg/kg	ND	0.49	
Fluorene	86-73-7	mg/kg	ND	0.49	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.49	
Pyrene	129-00-0	mg/kg	ND	0.49	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND A	9.7	
C19-C36 Aliphatics		mg/kg	ND A	19	
C11-C22 Aromatics		mg/kg	ND C	19	

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	95	40-140 %
o-Terphenyl	%	93	40-140 %
2-Fluorobiphenyl	%	85	40-140 %
2-Bromonaphthalene	%	97	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

Z A 'J' qualifier indicates an estimated value.

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attached

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attached

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.6 Deg. C			
Extraction Method	SW646 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID:	MW-107	Lab ID:	MC47231-3
Method for Targets:	MADEP EPH REV 1.1	Date Collected:	8/8/2016	Date Received:	8/9/2016
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	8/10/2016 9:00:00 PM	8/16/2016		N/A
EPH Fractionation Surrogate Standards	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
	2-Bromonaphthalene	79.9	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	ND A	22	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.55	
Phenanthrene	85-01-8	mg/kg	ND	0.55	
Acenaphthene	83-32-9	mg/kg	ND	0.55	
Naphthalene	91-20-3	mg/kg	ND	0.55	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.55	
Anthracene	120-12-7	mg/kg	ND	0.55	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.55	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.55	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.55	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.55	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.55	
Chrysene	218-01-9	mg/kg	ND	0.55	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.55	
Fluoranthene	206-44-0	mg/kg	ND	0.55	
Fluorene	86-73-7	mg/kg	ND	0.55	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.55	
Pyrene	129-00-0	mg/kg	ND	0.55	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND A	11	
C19-C36 Aliphatics		mg/kg	ND A	22	
C11-C22 Aromatics		mg/kg	ND C	22	

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	105	40-140 %
o-Terphenyl	%	99	40-140 %
2-Fluorobiphenyl	%	96	40-140 %
2-Bromonaphthalene	%	108	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

Z A 'J' qualifier indicates an estimated value.

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attached

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attached

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sadimant ☐	Othar ☐			
Containers	Satisfactory ☑	Broken ☐	Laaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on ice ☐	Raceived at 4 Deg. C ☐	Other ☑	Rec'd at 1 6 Deg C			
Extraction Method	SW846 3546						

Method for Ranges	MADEP EPH REV 1 1	Client ID: MW-108		Lab ID: MC47231-4	
Method for Targets	MADEP EPH REV 1 1	Date Collected: 8/8/2016		Date Received: 8/9/2016	
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	8/10/2016 9 00 00 PM	8/16/2016		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
	2-Bromonaphthalene	79 4	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj)		mg/kg	ND A	22	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0 54	
Phenanthrene	85-01-8	mg/kg	ND	0 54	
Acenaphthene	83-32-9	mg/kg	ND	0 54	
Naphthalene	91-20-3	mg/kg	ND	0 54	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0 54	
Anthracene	120-12-7	mg/kg	ND	0 54	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0 54	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0 54	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0 54	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0 54	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0 54	
Chrysene	218-01-9	mg/kg	ND	0 54	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0 54	
Fluoranthene	206-44-0	mg/kg	ND	0 54	
Fluorene	86-73-7	mg/kg	ND	0 54	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0 54	
Pyrene	129-00-0	mg/kg	ND	0 54	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND A	11	
C19-C36 Aliphatics		mg/kg	ND A	22	
C11-C22 Aromatics		mg/kg	ND C	22	

Surrogate Recoveries		Result	Acceptence Range
1-Chlorooctadecane	%	98	40-140 %
o-Terphenyl	%	93	40-140 %
2-Fluorobiphenyl	%	89	40-140 %
2-Bromonaphthalene	%	101	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sedimant ☐	Othar ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on ice ☐	Raceived at 4 Deg. C ☐	Other ☑	Rec'd at 1 6 Deg C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1 1	Client ID: B-103		Lab ID: MC47231-5	
Method for Targets:	MADEP EPH REV 1 1	Date Collected: 8/8/2016		Date Received: 8/9/2016	
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	8/10/2016 9 00 00 PM	8/16/2016		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
	2-Bromonaphthalene	74	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj)		mg/kg	ND A	23	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0 58	
Phenanthrene	85-01-8	mg/kg	ND	0 58	
Acenaphthene	83-32-9	mg/kg	ND	0 58	
Naphthalene	91-20-3	mg/kg	ND	0 58	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0 58	
Anthracene	120-12-7	mg/kg	ND	0 58	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0 58	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0 58	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0 58	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0 58	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0 58	
Chrysene	218-01-9	mg/kg	ND	0 58	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0 58	
Fluoranthene	206-44-0	mg/kg	ND	0 58	
Fluorene	86-73-7	mg/kg	ND	0 58	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0 58	
Pyrene	129-00-0	mg/kg	ND	0 58	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND A	12	
C19-C36 Aliphatics		mg/kg	ND A	23	
C11-C22 Aromatics		mg/kg	ND C	23	

Surrogate Recoveries		Result	Acceptence Range
1-Chlorooctadecane	%	97	40-140 %
o-Terphenyl	%	94	40-140 %
2-Fluorobiphenyl	%	91	40-140 %
2-Bromonaphthalene	%	104	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐				
Containers	Satisfactory ☑	Broken ☐	Leaking ☐					
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐					
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1 6 Deg C				
Extraction Method	SW846 3546							

Method for Ranges:	MADEP EPH REV 1 1	Client ID: B-101		Lab ID: MC47231-6	
Method for Targets:	MADEP EPH REV 1 1	Date Collected: 8/8/2016		Date Received: 8/9/2016	
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted.	First Date Run:	Last Date Run:	
	Aromatic o-Terphenyl	8/10/2016 9 00 00 PM	8/16/2016	N/A	
EPH Fractionation Surrogate Standards	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	94 4	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj)		mg/kg	35 9 A	19	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0 46	
Phenanthrene	85-01-8	mg/kg	ND	0 46	
Acenaphthene	83-32-9	mg/kg	ND	0 46	
Naphthalene	91-20-3	mg/kg	ND	0 46	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0 46	
Anthracene	120-12-7	mg/kg	ND	0 46	
Benzo(a)anthracene	56-55-3	mg/kg	0 845	0 46	
Benzo(a)pyrene	50-32-8	mg/kg	1 33	0 46	
Benzo(b)fluoranthene	205-99-2	mg/kg	2 24	0 46	
Benzo(g,h,i)perylene	191-24-2	mg/kg	1 02	0 46	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0 46	
Chrysene	218-01-9	mg/kg	0 747	0 46	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0 46	
Fluoranthene	206-44-0	mg/kg	1 05	0 46	
Fluorene	86-73-7	mg/kg	ND	0 46	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0 46	
Pyrene	129-00-0	mg/kg	1 05	0 46	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND A	9 3	
C19-C36 Aliphatics		mg/kg	ND A	19	
C11-C22 Aromatics		mg/kg	26 7 C	19	

Surrogate Recoveries		Acceptance Range	
1-Chlorooctadecane	%	90	40-140 %
o-Terphenyl	%	116	40-140 %
2-Fluorobiphenyl	%	112	40-140 %
2-Bromonaphthalene	%	127	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attached

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attached

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

5.3

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MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐				
Containers	Satisfactory ☑	Broken ☐	Leaking ☐					
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐					
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1 6 Deg C				
Extraction Method	SW846 3546							

Method for Ranges:	MADEP EPH REV 1 1	Client ID: B-102		Lab ID: MC47231-7	
Method for Targets:	MADEP EPH REV 1 1	Date Collected: 8/8/2016		Date Received: 8/9/2016	
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:	Last Date Run:	
	Aromatic, o-Terphenyl	8/10/2016 9 00 00 PM	8/16/2016	N/A	
EPH Fractionation Surrogate Standards	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	80	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj)		mg/kg	34 8 A	23	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0 57	
Phenanthrene	85-01-8	mg/kg	0 615	0 57	
Acenaphthene	83-32-9	mg/kg	ND	0 57	
Naphthalene	91-20-3	mg/kg	ND	0 57	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0 57	
Anthracene	120-12-7	mg/kg	ND	0 57	
Benzo(a)anthracene	56-55-3	mg/kg	1 21	0 57	
Benzo(a)pyrene	50-32-8	mg/kg	0 997	0 57	
Benzo(b)fluoranthene	205-99-2	mg/kg	1 93	0 57	
Benzo(g,h,i)perylene	191-24-2	mg/kg	0 609	0 57	
Benzo(k)fluoranthene	207-08-9	mg/kg	1 64	0 57	
Chrysene	218-01-9	mg/kg	1 07	0 57	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0 57	
Fluoranthene	206-44-0	mg/kg	1 74	0 57	
Fluorene	86-73-7	mg/kg	ND	0 57	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0 57	
Pyrene	129-00-0	mg/kg	1 46	0 57	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND A	11	
C19-C36 Aliphatics		mg/kg	ND A	23	
C11-C22 Aromatics		mg/kg	ND C	23	

Surrogate Recoveries		Acceptance Range	
1-Chlorooctadecane	%	101	40-140 %
o-Terphenyl	%	103	40-140 %
2-Fluorobiphenyl	%	94	40-140 %
2-Bromonaphthalene	%	108	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attached

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attached

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

5.3

5

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1 6 Deg C			
Extraction Method	SW846 3546						

Method for Ranges	MADEP EPH REV 1 1	Client ID: B-104		Lab ID: MC47231-8	
Method for Targets	MADEP EPH REV 1 1	Date Collected: 8/8/2016		Date Received: 8/9/2016	
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:	Last Date Run:	
	Aromatic o-Terphenyl	8/10/2016 9 00 00 PM	8/16/2016	N/A	
EPH Fractionation Surrogate Standards	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	97 6	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj)		mg/kg	96 8 [A]	18	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0 46	
Phenanthrene	85-01-8	mg/kg	4 17	0 46	
Acenaphthene	83-32-9	mg/kg	0 464	0 46	
Naphthalene	91-20-3	mg/kg	ND	0 46	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0 46	
Anthracene	120-12-7	mg/kg	1 09	0 46	
Benzo(a)anthracene	56-55-3	mg/kg	3 08	0 46	
Benzo(a)pyrene	50-32-8	mg/kg	2 65	0 46	
Benzo(b)fluoranthene	205-99-2	mg/kg	4 74	0 46	
Benzo(g,h,i)perylene	191-24-2	mg/kg	1 49	0 46	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0 46	
Chrysene	218-01-9	mg/kg	2 69	0 46	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0 46	
Fluoranthene	206-44-0	mg/kg	6 57	0 46	
Fluorene	86-73-7	mg/kg	ND	0 46	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0 46	
Pyrene	129-00-0	mg/kg	5 08	0 46	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND [A]	9 2	
C19-C36 Aliphatics		mg/kg	21 4 [A]	18	
C11-C22 Aromatics		mg/kg	63 3 [C]	18	

Surrogate Recoveries		Acceptance Range
1-Chlorooctadecane	94	40-140 %
o-Terphenyl	135	40-140 %
2-Fluorobiphenyl	99	40-140 %
2-Bromonaphthalene	101	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A "J" qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1 6 Deg C			
Methanol	Methanol Covering Soil, (mL Methanol/g soil: 1:1 +/- 25%)						

Method for Ranges:	MADEP VPH REV 1 1	Client ID: B-101		Lab ID: MC47231-6	
Method for Target Analytes:	MADEP VPH REV 1 1	Date Collected: 8/8/2016		Date Received: 8/9/2016	
VPH Surrogate Standards		Date Extracted:	First Date Run:	Last Date Run:	
PID		N/A	8/10/2016	N/A	
FID		% Solids:	Low Dilution:	High Dilution:	
		94 4	1	N/A	

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj)		N/A	mg/kg	ND [A]	6 3	
C9- C10 Aromatics (Unadj)		N/A	mg/kg	ND [A]	6 3	
C9- C12 Aliphatics (Unadj)		N/A	mg/kg	ND [A]	6 3	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0 31	
Toluene	108-88-3	C5-C8	mg/kg	ND	0 31	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0 063	
Benzene	71-43-2	C5-C8	mg/kg	ND	0 31	
Naphthalene	91-20-3	N/A	mg/kg	ND	0 31	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0 31	
m,p-Xylene		C9-C12	mg/kg	ND	0 31	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND [B]	6 3	
C9- C12 Aliphatics		N/A	mg/kg	ND [D]	6 3	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	98	70-130 %
PID 2,3,4-Trifluorotoluene	%	98	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons

Z A "J" qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1 6 Deg C			
Methanol	Methanol Covering Soil, (mL Methanol/g soil: 1:1 +/- 25%)						

Method for Ranges:	MADEP VPH REV 1 1	Client ID: B-102		Lab ID: MC47231-7	
Method for Target Analytes	MADEP VPH REV 1 1	Date Collected: 8/8/2016		Date Received: 8/9/2016	
VPH Surrogate Stenderds		Date Extracted:	First Date Run:	Last Date Run:	
PID		N/A	8/10/2016	N/A	
FID		% Solids:	Low Dilution:	High Dilution:	
		80	1	N/A	

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj)		N/A	mg/kg	ND A	8 6	
C9- C10 Aromatics (Unadj)		N/A	mg/kg	ND A	8 6	
C9- C12 Aliphatics (Unadj)		N/A	mg/kg	ND A	8 6	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0 43	
Toluene	108-88-3	C5-C8	mg/kg	ND	0 43	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0 086	
Benzene	71-43-2	C5-C8	mg/kg	ND	0 43	
Naphthalene	91-20-3	N/A	mg/kg	ND	0 43	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0 43	
m,p-Xylene		C9-C12	mg/kg	ND	0 43	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	8 6	
C9- C12 Aliphatics		N/A	mg/kg	ND D	8 6	

Surrogate Recoveries		Acceptance Range
FID 2,3,4-Trifluorotoluene	% 106	70-130 %
PID 2,3,4-Trifluorotoluene	% 106	70-130 %

Footnotes

A Hydrocarbon Renge date exclude concentrations of any surrogate(s) end/or internel stenderds eluting in that renge

B Hydrocarbon Renge date exclude concentrations of any surrogate(s) and/or internel stenderds eluting in that renge C5-C8 Aliphatic Hydrocerbons exclude the concentration of Target Analytes eluting in that renge

D Hydrocarbon Renge date exclude concentrations of any surrogate(s) end/or internal stenderds eluting in that renge C9-C12 aliphatic Hydrocerbons exclude conc of Terget Anelytes eluting in that renge AND concentration of C9-C10 Aromatic Hydrocerbons

Z A 'J' quelifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performence/acceptance stenderds for required QA/QC procedures echieved? ☑ Yes ☐ No- Details Attetched

Were eny significent modifications mede to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attetched

I attest under the peins end penelties of perjury thet, based upon my inquiry of those individuals immediately responsible for obtaining the informetion, the materiel contained in this report is, to the best of my knowledge and belief, accurate and compiete

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

5.4 5

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1 6 Deg C			
Methanol	Methanol Covering Soil, (mL Methanol/g soil: 1:1 +/- 25%)						

Method for Ranges:	MADEP VPH REV 1 1	Client ID: B-104		Lab ID: MC47231-8	
Method for Target Analytes:	MADEP VPH REV 1 1	Date Collected: 8/8/2016		Date Received: 8/9/2016	
VPH Surrogate Stenderds		Date Extracted:	First Date Run:	Last Date Run:	
PID		N/A	8/10/2016	N/A	
FID		% Solids:	Low Dilution:	High Dilution:	
		97 6	1	N/A	

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj)		N/A	mg/kg	ND A	5	
C9- C10 Aromatics (Unadj)		N/A	mg/kg	ND A	5	
C9- C12 Aliphatics (Unadj)		N/A	mg/kg	ND A	5	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0 25	
Toluene	108-88-3	C5-C8	mg/kg	ND	0 25	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0 05	
Benzene	71-43-2	C5-C8	mg/kg	ND	0 25	
Naphthalene	91-20-3	N/A	mg/kg	ND	0 25	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0 25	
m,p-Xylene		C9-C12	mg/kg	ND	0 25	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	5	
C9- C12 Aliphatics		N/A	mg/kg	ND D	5	

Surrogate Recoveries		Acceptance Range
FID 2,3,4-Trifluorotoluene	% 95	70-130 %
PID 2,3,4-Trifluorotoluene	% 95	70-130 %

Footnotes

A Hydrocarbon Renge date exclude concentrations of eny surrogate(s) end/or internel stenderds eluting in that renge

B Hydrocarbon Renge date exclude concentrations of any surrogate(s) and/or internel stenderds eluting in that renge. C5-C8 Aliphatic Hydrocerbons exclude the concentration of Terget Aneiytes eluting in that renge.

D Hydrocarbon Renge date exclude concentrations of eny surrogate(s) and/or internel stenderds eluting in that renge. C9-C12 aliphatic Hydrocerbons exclude conc of Terget Analytes eluting in that renge AND concentration of C9-C10 Aromatic Hydrocerbons

Z A 'J' quelifier indicates en estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched

Were ell performence/ecceptanca stenderds for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attetched

Were eny significant modifications made to the VPH method, es specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the peins end penalties of perjury that, beead upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and compiete

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/16/2016

5.4 5

Internal Sample Tracking Chronicle

EnviroTrac

Job No: MC47231

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No 03 990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC47231-1	Collected 08-AUG-16 08 30 By LMFM Received 09-AUG-16 By BA MW-105					
MC47231-1	SM 2540G-97 MOD	10-AUG-16	VY			%SOL
MC47231-1	SW846 7471B	11-AUG-16 10 59	EAL	10-AUG-16	EM	HG
MC47231-1	SW846 6010C	11-AUG-16 12 48	EAL	10-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47231-1	MADEP EPH REV 1 1	15-AUG-16 23 27	TA	10-AUG-16	AJ	BMAEPH
MC47231-2	Collected 08-AUG-16 09:20 By LMFM Received 09-AUG-16 By BA MW-106					
MC47231-2	SM 2540G-97 MOD	10-AUG-16	VY			%SOL
MC47231-2	SW846 7471B	11-AUG-16 11 01	EAL	10-AUG-16	EM	HG
MC47231-2	SW846 6010C	11-AUG-16 12 52	EAL	10-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47231-2	MADEP EPH REV 1 1	15-AUG-16 23 55	TA	10-AUG-16	AJ	BMAEPH
MC47231-3	Collected 08-AUG-16 10 55 By LMFM Received 09-AUG-16 By BA MW-107					
MC47231-3	SM 2540G-97 MOD	10-AUG-16	VY			%SOL
MC47231-3	SW846 7471B	11-AUG-16 11 04	EAL	10-AUG-16	EM	HG
MC47231-3	SW846 6010C	11-AUG-16 12 57	EAL	10-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47231-3	MADEP EPH REV 1 1	16-AUG-16 00 23	TA	10-AUG-16	AJ	BMAEPH
MC47231-4	Collected 08-AUG-16 15 05 By LMFM Received 09-AUG-16 By BA MW-108					
MC47231-4	SM 2540G-97 MOD	10-AUG-16	VY			%SOL
MC47231-4	SW846 7471B	11-AUG-16 11 06	EAL	10-AUG-16	EM	HG
MC47231-4	SW846 6010C	11-AUG-16 13 02	EAL	10-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47231-4	MADEP EPH REV 1 1	16-AUG-16 00 51	TA	10-AUG-16	AJ	BMAEPH
MC47231-5	Collected 08-AUG-16 12 57 By LMFM Received 09-AUG-16 By BA B-103					
MC47231-5	SM 2540G-97 MOD	10-AUG-16	VY			%SOI

Internal Sample Tracking Chronicle

EnviroTrac

Job No: MC47231

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC47231-5	SW846 7471B	11-AUG-16 11 09	EAL	10-AUG-16	EM	HG
MC47231-5	SW846 6010C	11-AUG-16 13 07	EAL	10-AUG-16	EM	AS,BA,BE,CD,CR,NI,PB,SB,TL,V,ZN
MC47231-5	SW846 6010C	12-AUG-16 13 50	EAL	10-AUG-16	EM	AG,SE
MC47231-5	MADEP EPH REV 1 1	16-AUG-16 01 19	TA	10-AUG-16	AJ	BMAEPH
MC47231-6	Collected: 08-AUG-16 10 00 By: LMFM Received 09-AUG-16 By: BA B-101					
MC47231-6	SM 2540G-97 MOD	10-AUG-16	VY			%SOL
MC47231-6	MADEP VPH REV 1 1	10-AUG-16 13 44	AF			VMAVPH
MC47231-6	SW846 1020	11-AUG-16	BF			IGN
MC47231-6	SW846 7471B	11-AUG-16 10 32	EAL	10-AUG-16	EM	HG
MC47231-6	SW846 9045D	11-AUG-16 12 25	EL			PH
MC47231-6	SW846 6010C	11-AUG-16 13 13	EAL	10-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47231-6	SW846 8260C	11-AUG-16 16 11	KP			V8260MCP
MC47231-6	SW846 CHAP7	12-AUG-16	BF	12-AUG-16	BF	SREAC
MC47231-6	SW846 CHAP7	12-AUG-16 11 25	BF	12-AUG-16	BF	CREAC
MC47231-6	SW846 8082A	13-AUG-16 15 04	NK	10-AUG-16	AJ	P8082MCP
MC47231-6	EPA 120 1M	15-AUG-16	EL			SCON
MC47231-6	SW846 8270D	15-AUG-16 17 46	MR	10-AUG-16	PA	AB8270MCP
MC47231-6	MADEP EPH REV 1 1	16-AUG-16 01 47	TA	10-AUG-16	AJ	BMAEPH
MC47231-7	Collected: 08-AUG-16 11 50 By LMFM Received 09-AUG-16 By BA B-102					
MC47231-7	SM 2540G-97 MOD	10-AUG-16	VY			%SOL
MC47231-7	MADEP VPH REV 1 1	10-AUG-16 14 23	AF			VMAVPH
MC47231-7	SW846 1020	11-AUG-16	BF			IGN
MC47231-7	SW846 7471B	11-AUG-16 11 35	EAL	10-AUG-16	EM	HG
MC47231-7	SW846 9045D	11-AUG-16 12 25	EL			PH
MC47231-7	SW846 6010C	11-AUG-16 13 17	EAL	10-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47231-7	SW846 8260C	11-AUG-16 16 40	KP			V8260MCP
MC47231-7	SW846 CHAP7	12-AUG-16	BF	12-AUG-16	BF	SREAC
MC47231-7	SW846 CHAP7	12-AUG-16 11 25	BF	12-AUG-16	BF	CREAC
MC47231-7	SW846 8082A	13-AUG-16 15 20	NK	10-AUG-16	AJ	P8082MCP
MC47231-7	EPA 120 1M	15-AUG-16	EL			SCON
MC47231-7	SW846 8270D	15-AUG-16 18 14	MR	10-AUG-16	PA	AB8270MCP

Internal Sample Tracking Chronicle

EnviroTrac

Job No: MC47231

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC47231-7	MADEP EPH REV 1 1	16-AUG-16 02 15	TA	10-AUG-16	AJ	BMAEPH
MC47231-8	Collected: 08-AUG-16 14 10 By: LMFM Received: 09-AUG-16 By: BA B-104					
MC47231-8	SM 2540G-97 MOD	10-AUG-16	VY			%SOL
MC47231-8	MADEP VPH REV 1 1	10-AUG-16 15 01	AF			VMAVPH
MC47231-8	SW846 1020	11-AUG-16	BF			IGN
MC47231-8	SW846 6010C	11-AUG-16 11 14	EAL	10-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47231-8	SW846 7471B	11-AUG-16 11 30	EAL	10-AUG-16	EM	HG
MC47231-8	SW846 9045D	11-AUG-16 12 25	EL			PH
MC47231-8	SW846 8260C	11-AUG-16 17 08	KP			V8260MCP
MC47231-8	SW846 CHAP7	12-AUG-16	BF	12-AUG-16	BF	SREAC
MC47231-8	SW846 CHAP7	12-AUG-16 11 25	BF	12-AUG-16	BF	CREAC
MC47231-8	SW846 8082A	13-AUG-16 15 36	NK	10-AUG-16	AJ	P8082MCP
MC47231-8	EPA 120 1M	15-AUG-16	EL			SCON
MC47231-8	SW846 8270D	15-AUG-16 18 42	MR	10-AUG-16	PA	AB8270MCP
MC47231-8	MADEP EPH REV 1 1	16-AUG-16 02 44	TA	10-AUG-16	AJ	BMAEPH

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSM2873	SW846 8260C						
MSM2873-BS	67-64-1	Acetone	BSP	REC	117	%	70-130
MSM2873-BS	71-43-2	Benzene	BSP	REC	107	%	70-130
MSM2873-BS	108-86-1	Bromobenzene	BSP	REC	100	%	70-130
MSM2873-BS	74-97-5	Bromochloromethane	BSP	REC	113	%	70-130
MSM2873-BS	75-27-4	Bromodichloromethane	BSP	REC	98	%	70-130
MSM2873-BS	75-25-2	Bromoform	BSP	REC	97	%	70-130
MSM2873-BS	74-83-9	Bromomethane	BSP	REC	113	%	70-130
MSM2873-BS	78-93-3	2-Butanone (MEK)	BSP	REC	115	%	70-130
MSM2873-BS	104-51-8	n-Butylbenzene	BSP	REC	97	%	70-130
MSM2873-BS	135-98-8	sec-Butylbenzene	BSP	REC	97	%	70-130
MSM2873-BS	98-06-6	tert-Butylbenzene	BSP	REC	98	%	70-130
MSM2873-BS	75-15-0	Carbon disulfide	BSP	REC	138	%	70-130
MSM2873-BS	56-23-5	Carbon tetrachloride	BSP	REC	107	%	70-130
MSM2873-BS	108-90-7	Chlorobenzene	BSP	REC	100	%	70-130
MSM2873-BS	75-00-3	Chloroethane	BSP	REC	108	%	70-130
MSM2873-BS	67-66-3	Chloroform	BSP	REC	102	%	70-130
MSM2873-BS	74-87-3	Chloromethane	BSP	REC	106	%	70-130
MSM2873-BS	95-49-8	o-Chlorotoluene	BSP	REC	96	%	70-130
MSM2873-BS	106-43-4	p-Chlorotoluene	BSP	REC	96	%	70-130
MSM2873-BS	108-20-3	Di-Isopropyl ether	BSP	REC	105	%	70-130
MSM2873-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	95	%	70-130
MSM2873-BS	124-48-1	Dibromochloromethane	BSP	REC	98	%	70-130
MSM2873-BS	106-93-4	1,2-Dibromoethane	BSP	REC	102	%	70-130
MSM2873-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	97	%	70-130
MSM2873-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	95	%	70-130
MSM2873-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	94	%	70-130
MSM2873-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	106	%	70-130
MSM2873-BS	75-34-3	1,1-Dichloroethane	BSP	REC	106	%	70-130
MSM2873-BS	107-06-2	1,2-Dichloroethane	BSP	REC	104	%	70-130
MSM2873-BS	75-35-4	1,1-Dichloroethene	BSP	REC	129	%	70-130
MSM2873-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	111	%	70-130
MSM2873-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	109	%	70-130
MSM2873-BS	78-87-5	1,2-Dichloropropane	BSP	REC	101	%	70-130
MSM2873-BS	142-28-9	1,3-Dichloropropane	BSP	REC	104	%	70-130
MSM2873-BS	594-20-7	2,2-Dichloropropane	BSP	REC	105	%	70-130
MSM2873-BS	563-58-6	1,1-Dichloropropene	BSP	REC	110	%	70-130
MSM2873-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	98	%	70-130
MSM2873-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	92	%	70-130
MSM2873-BS	123-91-1	1,4-Dioxane	BSP	REC	117	%	70-130
MSM2873-BS	60-29-7	Ethyl Ether	BSP	REC	118	%	70-130
MSM2873-BS	100-41-4	Ethylbenzene	BSP	REC	103	%	70-130
MSM2873-BS	87-68-3	Hexachlorobutadiene	BSP	REC	96	%	70-130

* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSM2873-BS	591-78-6	2-Hexanone	BSP	REC	108	%	70-130
MSM2873-BS	98-82-8	Isopropylbenzene	BSP	REC	97	%	70-130
MSM2873-BS	99-87-6	p-Isopropyltoluene	BSP	REC	98	%	70-130
MSM2873-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	108	%	70-130
MSM2873-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	94	%	70-130
MSM2873-BS	74-95-3	Methylene bromide	BSP	REC	101	%	70-130
MSM2873-BS	75-09-2	Methylene chloride	BSP	REC	127 [a]	%	70-130
MSM2873-BS	91-20-3	Naphthalene	BSP	REC	88	%	70-130
MSM2873-BS	103-65-1	n-Propylbenzene	BSP	REC	93	%	70-130
MSM2873-BS	100-42-5	Styrene	BSP	REC	102	%	70-130
MSM2873-BS	994-05-8	tert-Amyl Methyl Ether	BSP	REC	102	%	70-130
MSM2873-BS	637-92-3	tert-Butyl Ethyl Ether	BSP	REC	101	%	70-130
MSM2873-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	102	%	70-130
MSM2873-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	97	%	70-130
MSM2873-BS	127-18-4	Tetrachloroethene	BSP	REC	103	%	70-130
MSM2873-BS	109-99-9	Tetrahydrofuran	BSP	REC	103	%	70-130
MSM2873-BS	108-88-3	Toluene	BSP	REC	104	%	70-130
MSM2873-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	95	%	70-130
MSM2873-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	93	%	70-130
MSM2873-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	108	%	70-130
MSM2873-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	101	%	70-130
MSM2873-BS	79-01-6	Trichloroethene	BSP	REC	104	%	70-130
MSM2873-BS	75-69-4	Trichlorofluoromethane	BSP	REC	97	%	70-130
MSM2873-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	93	%	70-130
MSM2873-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	97	%	70-130
MSM2873-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	102	%	70-130
MSM2873-BS	75-01-4	Vinyl chloride	BSP	REC	91	%	70-130
MSM2873-BS		m,p-Xylene	BSP	REC	103	%	70-130
MSM2873-BS	95-47-6	o-Xylene	BSP	REC	102	%	70-130
MSM2873-BS	1330-20-7	Xylene (total)	BSP	REC	103	%	70-130
MSM2873-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	102	%	70-130
MSM2873-BS	2037-26-5	Toluene-D8	BSP	SURR	100	%	70-130
MSM2873-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	96	%	70-130
MSM2873-BSD	67-64-1	Acetone	BSD	REC	109	%	70-130
MSM2873-BSD	67-64-1	Acetone	BSD	RPD	7	%	20
MSM2873-BSD	71-43-2	Benzene	BSD	REC	109	%	70-130
MSM2873-BSD	71-43-2	Benzene	BSD	RPD	2	%	20
MSM2873-BSD	108-86-1	Bromobenzene	BSD	REC	100	%	70-130
MSM2873-BSD	108-86-1	Bromobenzene	BSD	RPD	0	%	20
MSM2873-BSD	74-97-5	Bromochloromethane	BSD	REC	112	%	70-130
MSM2873-BSD	74-97-5	Bromochloromethane	BSD	RPD	1	%	20
MSM2873-BSD	75-27-4	Bromodichloromethane	BSD	REC	99	%	70-130
MSM2873-BSD	75-27-4	Bromodichloromethane	BSD	RPD	1	%	20
MSM2873-BSD	75-25-2	Bromoform	BSD	REC	98	%	70-130
MSM2873-BSD	75-25-2	Bromoform	BSD	RPD	1	%	20

* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSM2873-BSD	74-83-9	Bromomethane	BSD	REC	112	%	70-130
MSM2873-BSD	74-83-9	Bromomethane	BSD	RPD	1	%	20
MSM2873-BSD	78-93-3	2-Butanone (MEK)	BSD	REC	104	%	70-130
MSM2873-BSD	78-93-3	2-Butanone (MEK)	BSD	RPD	10	%	20
MSM2873-BSD	104-51-8	n-Butylbenzene	BSD	REC	97	%	70-130
MSM2873-BSD	104-51-8	n-Butylbenzene	BSD	RPD	0	%	20
MSM2873-BSD	135-98-8	sec-Butylbenzene	BSD	REC	97	%	70-130
MSM2873-BSD	135-98-8	sec-Butylbenzene	BSD	RPD	1	%	20
MSM2873-BSD	98-06-6	tert-Butylbenzene	BSD	REC	99	%	70-130
MSM2873-BSD	98-06-6	tert-Butylbenzene	BSD	RPD	1	%	20
MSM2873-BSD	75-15-0	Carbon disulfide	BSD	REC	136	%	70-130
MSM2873-BSD	75-15-0	Carbon disulfide	BSD	RPD	1	%	20
MSM2873-BSD	56-23-5	Carbon tetrachloride	BSD	REC	108	%	70-130
MSM2873-BSD	56-23-5	Carbon tetrachloride	BSD	RPD	1	%	20
MSM2873-BSD	108-90-7	Chlorobenzene	BSD	REC	101	%	70-130
MSM2873-BSD	108-90-7	Chlorobenzene	BSD	RPD	1	%	20
MSM2873-BSD	75-00-3	Chloroethane	BSD	REC	106	%	70-130
MSM2873-BSD	75-00-3	Chloroethane	BSD	RPD	2	%	20
MSM2873-BSD	67-66-3	Chloroform	BSD	REC	103	%	70-130
MSM2873-BSD	67-66-3	Chloroform	BSD	RPD	1	%	20
MSM2873-BSD	74-87-3	Chloromethane	BSD	REC	105	%	70-130
MSM2873-BSD	74-87-3	Chloromethane	BSD	RPD	1	%	20
MSM2873-BSD	95-49-8	o-Chlorotoluene	BSD	REC	98	%	70-130
MSM2873-BSD	95-49-8	o-Chlorotoluene	BSD	RPD	1	%	20
MSM2873-BSD	106-43-4	p-Chlorotoluene	BSD	REC	96	%	70-130
MSM2873-BSD	106-43-4	p-Chlorotoluene	BSD	RPD	0	%	20
MSM2873-BSD	108-20-3	Di-Isopropyl ether	BSD	REC	106	%	70-130
MSM2873-BSD	108-20-3	Di-Isopropyl ether	BSD	RPD	1	%	20
MSM2873-BSD	96-12-8	1,2-Dibromo-3-chloropropane	BSD	REC	94	%	70-130
MSM2873-BSD	96-12-8	1,2-Dibromo-3-chloropropane	BSD	RPD	2	%	20
MSM2873-BSD	124-48-1	Dibromochloromethane	BSD	REC	100	%	70-130
MSM2873-BSD	124-48-1	Dibromochloromethane	BSD	RPD	1	%	20
MSM2873-BSD	106-93-4	1,2-Dibromoethane	BSD	REC	102	%	70-130
MSM2873-BSD	106-93-4	1,2-Dibromoethane	BSD	RPD	0	%	20
MSM2873-BSD	95-50-1	1,2-Dichlorobenzene	BSD	REC	98	%	70-130
MSM2873-BSD	95-50-1	1,2-Dichlorobenzene	BSD	RPD	1	%	20
MSM2873-BSD	541-73-1	1,3-Dichlorobenzene	BSD	REC	97	%	70-130
MSM2873-BSD	541-73-1	1,3-Dichlorobenzene	BSD	RPD	2	%	20
MSM2873-BSD	106-46-7	1,4-Dichlorobenzene	BSD	REC	95	%	70-130
MSM2873-BSD	106-46-7	1,4-Dichlorobenzene	BSD	RPD	1	%	20
MSM2873-BSD	75-71-8	Dichlorodifluoromethane	BSD	REC	104	%	70-130
MSM2873-BSD	75-71-8	Dichlorodifluoromethane	BSD	RPD	2	%	20
MSM2873-BSD	75-34-3	1,1-Dichloroethane	BSD	REC	107	%	70-130
MSM2873-BSD	75-34-3	1,1-Dichloroethane	BSD	RPD	0	%	20
MSM2873-BSD	107-06-2	1,2-Dichloroethane	BSD	REC	105	%	70-130

* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSM2873-BSD	107-06-2	1,2-Dichloroethane	BSD	RPD	1	%	20
MSM2873-BSD	75-35-4	1,1-Dichloroethene	BSD	REC	129	%	70-130
MSM2873-BSD	75-35-4	1,1-Dichloroethene	BSD	RPD	0	%	20
MSM2873-BSD	156-59-2	cis-1,2-Dichloroethene	BSD	REC	113	%	70-130
MSM2873-BSD	156-59-2	cis-1,2-Dichloroethene	BSD	RPD	1	%	20
MSM2873-BSD	156-60-5	trans-1,2-Dichloroethene	BSD	REC	109	%	70-130
MSM2873-BSD	156-60-5	trans-1,2-Dichloroethene	BSD	RPD	1	%	20
MSM2873-BSD	78-87-5	1,2-Dichloropropane	BSD	REC	102	%	70-130
MSM2873-BSD	78-87-5	1,2-Dichloropropane	BSD	RPD	2	%	20
MSM2873-BSD	142-28-9	1,3-Dichloropropane	BSD	REC	105	%	70-130
MSM2873-BSD	142-28-9	1,3-Dichloropropane	BSD	RPD	0	%	20
MSM2873-BSD	594-20-7	2,2-Dichloropropane	BSD	REC	104	%	70-130
MSM2873-BSD	594-20-7	2,2-Dichloropropane	BSD	RPD	1	%	20
MSM2873-BSD	563-58-6	1,1-Dichloropropene	BSD	REC	112	%	70-130
MSM2873-BSD	563-58-6	1,1-Dichloropropene	BSD	RPD	2	%	20
MSM2873-BSD	10061-01-5	cis-1,3-Dichloropropene	BSD	REC	99	%	70-130
MSM2873-BSD	10061-01-5	cis-1,3-Dichloropropene	BSD	RPD	1	%	20
MSM2873-BSD	10061-02-6	trans-1,3-Dichloropropene	BSD	REC	94	%	70-130
MSM2873-BSD	10061-02-6	trans-1,3-Dichloropropene	BSD	RPD	2	%	20
MSM2873-BSD	123-91-1	1,4-Dioxane	BSD	REC	111	%	70-130
MSM2873-BSD	123-91-1	1,4-Dioxane	BSD	RPD	5	%	20
MSM2873-BSD	60-29-7	Ethyl Ether	BSD	REC	119	%	70-130
MSM2873-BSD	60-29-7	Ethyl Ether	BSD	RPD	1	%	20
MSM2873-BSD	100-41-4	Ethylbenzene	BSD	REC	104	%	70-130
MSM2873-BSD	100-41-4	Ethylbenzene	BSD	RPD	1	%	20
MSM2873-BSD	87-68-3	Hexachlorobutadiene	BSD	REC	97	%	70-130
MSM2873-BSD	87-68-3	Hexachlorobutadiene	BSD	RPD	1	%	20
MSM2873-BSD	591-78-6	2-Hexanone	BSD	REC	101	%	70-130
MSM2873-BSD	591-78-6	2-Hexanone	BSD	RPD	7	%	20
MSM2873-BSD	98-82-8	Isopropylbenzene	BSD	REC	97	%	70-130
MSM2873-BSD	98-82-8	Isopropylbenzene	BSD	RPD	0	%	20
MSM2873-BSD	99-87-6	p-Isopropyltoluene	BSD	REC	100	%	70-130
MSM2873-BSD	99-87-6	p-Isopropyltoluene	BSD	RPD	1	%	20
MSM2873-BSD	1634-04-4	Methyl Tert Butyl Ether	BSD	REC	108	%	70-130
MSM2873-BSD	1634-04-4	Methyl Tert Butyl Ether	BSD	RPD	0	%	20
MSM2873-BSD	108-10-1	4-Methyl-2-pentanone (MIBK)	BSD	REC	93	%	70-130
MSM2873-BSD	108-10-1	4-Methyl-2-pentanone (MIBK)	BSD	RPD	2	%	20
MSM2873-BSD	74-95-3	Methylene bromide	BSD	REC	102	%	70-130
MSM2873-BSD	74-95-3	Methylene bromide	BSD	RPD	1	%	20
MSM2873-BSD	75-09-2	Methylene chloride	BSD	REC	127 [a]	%	70-130
MSM2873-BSD	75-09-2	Methylene chloride	BSD	RPD	0	%	20
MSM2873-BSD	91-20-3	Naphthalene	BSD	REC	88	%	70-130
MSM2873-BSD	91-20-3	Naphthalene	BSD	RPD	0	%	20
MSM2873-BSD	103-65-1	n-Propylbenzene	BSD	REC	94	%	70-130
MSM2873-BSD	103-65-1	n-Propylbenzene	BSD	RPD	0	%	20

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* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSM2873-BSD	100-42-5	Styrene	BSD	REC	104	%	70-130
MSM2873-BSD	100-42-5	Styrene	BSD	RPD	2	%	20
MSM2873-BSD	994-05-8	tert-Amyl Methyl Ether	BSD	REC	103	%	70-130
MSM2873-BSD	994-05-8	tert-Amyl Methyl Ether	BSD	RPD	2	%	20
MSM2873-BSD	637-92-3	tert-Butyl Ethyl Ether	BSD	REC	101	%	70-130
MSM2873-BSD	637-92-3	tert-Butyl Ethyl Ether	BSD	RPD	0	%	20
MSM2873-BSD	630-20-6	1,1,1,2-Tetrachloroethane	BSD	REC	104	%	70-130
MSM2873-BSD	630-20-6	1,1,1,2-Tetrachloroethane	BSD	RPD	2	%	20
MSM2873-BSD	79-34-5	1,1,2,2-Tetrachloroethane	BSD	REC	95	%	70-130
MSM2873-BSD	79-34-5	1,1,2,2-Tetrachloroethane	BSD	RPD	2	%	20
MSM2873-BSD	127-18-4	Tetrachloroethene	BSD	REC	103	%	70-130
MSM2873-BSD	127-18-4	Tetrachloroethene	BSD	RPD	0	%	20
MSM2873-BSD	109-99-9	Tetrahydrofuran	BSD	REC	95	%	70-130
MSM2873-BSD	109-99-9	Tetrahydrofuran	BSD	RPD	7	%	20
MSM2873-BSD	108-88-3	Toluene	BSD	REC	104	%	70-130
MSM2873-BSD	108-88-3	Toluene	BSD	RPD	0	%	20
MSM2873-BSD	87-61-6	1,2,3-Trichlorobenzene	BSD	REC	97	%	70-130
MSM2873-BSD	87-61-6	1,2,3-Trichlorobenzene	BSD	RPD	2	%	20
MSM2873-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	REC	95	%	70-130
MSM2873-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	RPD	2	%	20
MSM2873-BSD	71-55-6	1,1,1-Trichloroethane	BSD	REC	108	%	70-130
MSM2873-BSD	71-55-6	1,1,1-Trichloroethane	BSD	RPD	0	%	20
MSM2873-BSD	79-00-5	1,1,2-Trichloroethane	BSD	REC	101	%	70-130
MSM2873-BSD	79-00-5	1,1,2-Trichloroethane	BSD	RPD	0	%	20
MSM2873-BSD	79-01-6	Trichloroethene	BSD	REC	104	%	70-130
MSM2873-BSD	79-01-6	Trichloroethene	BSD	RPD	0	%	20
MSM2873-BSD	75-69-4	Trichlorofluoromethane	BSD	REC	96	%	70-130
MSM2873-BSD	75-69-4	Trichlorofluoromethane	BSD	RPD	1	%	20
MSM2873-BSD	96-18-4	1,2,3-Trichloropropane	BSD	REC	92	%	70-130
MSM2873-BSD	96-18-4	1,2,3-Trichloropropane	BSD	RPD	2	%	20
MSM2873-BSD	95-63-6	1,2,4-Trimethylbenzene	BSD	REC	98	%	70-130
MSM2873-BSD	95-63-6	1,2,4-Trimethylbenzene	BSD	RPD	1	%	20
MSM2873-BSD	108-67-8	1,3,5-Trimethylbenzene	BSD	REC	102	%	70-130
MSM2873-BSD	108-67-8	1,3,5-Trimethylbenzene	BSD	RPD	0	%	20
MSM2873-BSD	75-01-4	Vinyl chloride	BSD	REC	90	%	70-130
MSM2873-BSD	75-01-4	Vinyl chloride	BSD	RPD	1	%	20
MSM2873-BSD		m,p-Xylene	BSD	REC	104	%	70-130
MSM2873-BSD		m,p-Xylene	BSD	RPD	1	%	20
MSM2873-BSD	95-47-6	o-Xylene	BSD	REC	104	%	70-130
MSM2873-BSD	95-47-6	o-Xylene	BSD	RPD	2	%	20
MSM2873-BSD	1330-20-7	Xylene (total)	BSD	REC	104	%	70-130
MSM2873-BSD	1330-20-7	Xylene (total)	BSD	RPD	1	%	20
MSM2873-BSD	1868-53-7	Dibromofluoromethane	BSD	SURR	101	%	70-130
MSM2873-BSD	2037-26-5	Toluene-D8	BSD	SURR	100	%	70-130
MSM2873-BSD	460-00-4	4-Bromofluorobenzene	BSD	SURR	96	%	70-130

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* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSM2873-MB	1868-53-7	Dibromofluoromethane	MB	SURR	105	%	70-130
MSM2873-MB	2037-26-5	Toluene-D8	MB	SURR	102	%	70-130
MSM2873-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	103	%	70-130
MC47231-6	1868-53-7	Dibromofluoromethane	SAMP	SURR	109	%	70-130
MC47231-6	2037-26-5	Toluene-D8	SAMP	SURR	99	%	70-130
MC47231-6	460-00-4	4-Bromofluorobenzene	SAMP	SURR	111	%	70-130
MC47231-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	107	%	70-130
MC47231-7	2037-26-5	Toluene-D8	SAMP	SURR	99	%	70-130
MC47231-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	103	%	70-130
MC47231-8	1868-53-7	Dibromofluoromethane	SAMP	SURR	110	%	70-130
MC47231-8	2037-26-5	Toluene-D8	SAMP	SURR	99	%	70-130
MC47231-8	460-00-4	4-Bromofluorobenzene	SAMP	SURR	102	%	70-130
OP48397	SW846 8270D						
OP48397-BS	65-85-0	Benzoic acid	BSP	REC	45	%	30-130
OP48397-BS	95-57-8	2-Chlorophenol	BSP	REC	46	%	30-130
OP48397-BS	59-50-7	4-Chloro-3-methyl phenol	BSP	REC	59	%	30-130
OP48397-BS	120-83-2	2,4-Dichlorophenol	BSP	REC	48	%	30-130
OP48397-BS	105-67-9	2,4-Dimethylphenol	BSP	REC	46	%	30-130
OP48397-BS	51-28-5	2,4-Dinitrophenol	BSP	REC	41	%	30-130
OP48397-BS	95-48-7	2-Methylphenol	BSP	REC	47	%	30-130
OP48397-BS		3&4-Methylphenol	BSP	REC	43	%	30-130
OP48397-BS	88-75-5	2-Nitrophenol	BSP	REC	47	%	30-130
OP48397-BS	100-02-7	4-Nitrophenol	BSP	REC	70	%	30-130
OP48397-BS	87-86-5	Pentachlorophenol	BSP	REC	57	%	30-130
OP48397-BS	108-95-2	Phenol	BSP	REC	48	%	30-130
OP48397-BS	95-95-4	2,4,5-Trichlorophenol	BSP	REC	66	%	30-130
OP48397-BS	88-06-2	2,4,6-Trichlorophenol	BSP	REC	62	%	30-130
OP48397-BS	83-32-9	Acenaphthene	BSP	REC	64	%	40-140
OP48397-BS	208-96-8	Acenaphthylene	BSP	REC	50	%	40-140
OP48397-BS	98-86-2	Acetophenone	BSP	REC	44	%	40-140
OP48397-BS	62-53-3	Aniline	BSP	REC	35	%	40-140
OP48397-BS	120-12-7	Anthracene	BSP	REC	79	%	40-140
OP48397-BS	56-55-3	Benzo(a)anthracene	BSP	REC	96	%	40-140
OP48397-BS	50-32-8	Benzo(a)pyrene	BSP	REC	84	%	40-140
OP48397-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	92	%	40-140
OP48397-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	87	%	40-140
OP48397-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	91	%	40-140
OP48397-BS	101-55-3	4-Bromophenyl phenyl ether	BSP	REC	75	%	40-140
OP48397-BS	85-68-7	Butyl benzyl phthalate	BSP	REC	103	%	40-140
OP48397-BS	91-58-7	2-Chloronaphthalene	BSP	REC	57	%	40-140
OP48397-BS	106-47-8	4-Chloroaniline	BSP	REC	37	%	40-140
OP48397-BS	218-01-9	Chrysene	BSP	REC	91	%	40-140
OP48397-BS	111-91-1	bis(2-Chloroethoxy)methane	BSP	REC	49	%	40-140

* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP48397-BS	111-44-4	bis(2-Chloroethyl)ether	BSP	REC	49	%	40-140
OP48397-BS	108-60-1	bis(2-Chloroisopropyl)ether	BSP	REC	60	%	40-140
OP48397-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	53	%	40-140
OP48397-BS	122-66-7	1,2-Diphenylhydrazine	BSP	REC	69	%	40-140
OP48397-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	52	%	40-140
OP48397-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	51	%	40-140
OP48397-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	81	%	40-140
OP48397-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	72	%	40-140
OP48397-BS	91-94-1	3,3'-Dichlorobenzidine	BSP	REC	90	%	40-140
OP48397-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	85	%	40-140
OP48397-BS	132-64-9	Dibenzofuran	BSP	REC	62	%	40-140
OP48397-BS	84-74-2	Di-n-butyl phthalate	BSP	REC	97	%	40-140
OP48397-BS	117-84-0	Di-n-octyl phthalate	BSP	REC	107	%	40-140
OP48397-BS	84-66-2	Diethyl phthalate	BSP	REC	80	%	40-140
OP48397-BS	131-11-3	Dimethyl phthalate	BSP	REC	71	%	40-140
OP48397-BS	117-81-7	bis(2-Ethylhexyl)phthalate	BSP	REC	108	%	40-140
OP48397-BS	206-44-0	Fluoranthene	BSP	REC	89	%	40-140
OP48397-BS	86-73-7	Fluorene	BSP	REC	70	%	40-140
OP48397-BS	118-74-1	Hexachlorobenzene	BSP	REC	80	%	40-140
OP48397-BS	87-68-3	Hexachlorobutadiene	BSP	REC	47	%	40-140
OP48397-BS	77-47-4	Hexachlorocyclopentadiene	BSP	REC	10	%	40-140
OP48397-BS	67-72-1	Hexachloroethane	BSP	REC	50	%	40-140
OP48397-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	85	%	40-140
OP48397-BS	78-59-1	Isophorone	BSP	REC	52	%	40-140
OP48397-BS	91-57-6	2-Methylnaphthalene	BSP	REC	50	%	40-140
OP48397-BS	91-20-3	Naphthalene	BSP	REC	71	%	40-140
OP48397-BS	98-95-3	Nitrobenzene	BSP	REC	47	%	40-140
OP48397-BS	621-64-7	N-Nitroso-di-n-propylamine	BSP	REC	60	%	40-140
OP48397-BS	86-30-6	N-Nitrosodiphenylamine	BSP	REC	78	%	40-140
OP48397-BS	85-01-8	Phenanthrene	BSP	REC	82	%	40-140
OP48397-BS	129-00-0	Pyrene	BSP	REC	103	%	40-140
OP48397-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	49	%	40-140
OP48397-BS	367-12-4	2-Fluorophenol	BSP	SURR	42	%	30-130
OP48397-BS	4165-62-2	Phenol-d5	BSP	SURR	43	%	30-130
OP48397-BS	118-79-6	2,4,6-Tribromophenol	BSP	SURR	72	%	30-130
OP48397-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	43	%	30-130
OP48397-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	46	%	30-130
OP48397-BS	1718-51-0	Terphenyl-d14	BSP	SURR	81	%	30-130
OP48397-BSD	65-85-0	Benzoic acid	BSD	REC	41	%	30-130
OP48397-BSD	65-85-0	Benzoic acid	BSD	RPD	7	%	30
OP48397-BSD	95-57-8	2-Chlorophenol	BSD	REC	42	%	30-130
OP48397-BSD	95-57-8	2-Chlorophenol	BSD	RPD	5	%	30
OP48397-BSD	59-50-7	4-Chloro-3-methyl phenol	BSD	REC	64	%	30-130
OP48397-BSD	59-50-7	4-Chloro-3-methyl phenol	BSD	RPD	11	%	30
OP48397-BSD	120-83-2	2,4-Dichlorophenol	BSD	REC	53	%	30-130

* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP48397-BSD	120-83-2	2,4-Dichlorophenol	BSD	RPD	14	%	30
OP48397-BSD	105-67-9	2,4-Dimethylphenol	BSD	REC	49	%	30-130
OP48397-BSD	105-67-9	2,4-Dimethylphenol	BSD	RPD	9	%	30
OP48397-BSD	51-28-5	2,4-Dinitrophenol	BSD	REC	43	%	30-130
OP48397-BSD	51-28-5	2,4-Dinitrophenol	BSD	RPD	6	%	30
OP48397-BSD	95-48-7	2-Methylphenol	BSD	REC	49	%	30-130
OP48397-BSD	95-48-7	2-Methylphenol	BSD	RPD	7	%	30
OP48397-BSD		3&4-Methylphenol	BSD	REC	49	%	30-130
OP48397-BSD		3&4-Methylphenol	BSD	RPD	14	%	30
OP48397-BSD	88-75-5	2-Nitrophenol	BSD	REC	46	%	30-130
OP48397-BSD	88-75-5	2-Nitrophenol	BSD	RPD	1	%	30
OP48397-BSD	100-02-7	4-Nitrophenol	BSD	REC	71	%	30-130
OP48397-BSD	100-02-7	4-Nitrophenol	BSD	RPD	4	%	30
OP48397-BSD	87-86-5	Pentachlorophenol	BSD	REC	56	%	30-130
OP48397-BSD	87-86-5	Pentachlorophenol	BSD	RPD	0	%	30
OP48397-BSD	108-95-2	Phenol	BSD	REC	50	%	30-130
OP48397-BSD	108-95-2	Phenol	BSD	RPD	6	%	30
OP48397-BSD	95-95-4	2,4,5-Trichlorophenol	BSD	REC	71	%	30-130
OP48397-BSD	95-95-4	2,4,5-Trichlorophenol	BSD	RPD	10	%	30
OP48397-BSD	88-06-2	2,4,6-Trichlorophenol	BSD	REC	66	%	30-130
OP48397-BSD	88-06-2	2,4,6-Trichlorophenol	BSD	RPD	9	%	30
OP48397-BSD	83-32-9	Acenaphthene	BSD	REC	69	%	40-140
OP48397-BSD	83-32-9	Acenaphthene	BSD	RPD	10	%	30
OP48397-BSD	208-96-8	Acenaphthylene	BSD	REC	55	%	40-140
OP48397-BSD	208-96-8	Acenaphthylene	BSD	RPD	11	%	30
OP48397-BSD	98-86-2	Acetophenone	BSD	REC	42	%	40-140
OP48397-BSD	98-86-2	Acetophenone	BSD	RPD	4	%	30
OP48397-BSD	62-53-3	Aniline	BSD	REC	36	%	40-140
OP48397-BSD	62-53-3	Aniline	BSD	RPD	5	%	30
OP48397-BSD	120-12-7	Anthracene	BSD	REC	83	%	40-140
OP48397-BSD	120-12-7	Anthracene	BSD	RPD	7	%	30
OP48397-BSD	56-55-3	Benzo(a)anthracene	BSD	REC	95	%	40-140
OP48397-BSD	56-55-3	Benzo(a)anthracene	BSD	RPD	0	%	30
OP48397-BSD	50-32-8	Benzo(a)pyrene	BSD	REC	82	%	40-140
OP48397-BSD	50-32-8	Benzo(a)pyrene	BSD	RPD	0	%	30
OP48397-BSD	205-99-2	Benzo(b)fluoranthene	BSD	REC	91	%	40-140
OP48397-BSD	205-99-2	Benzo(b)fluoranthene	BSD	RPD	1	%	30
OP48397-BSD	191-24-2	Benzo(g,h,i)perylene	BSD	REC	88	%	40-140
OP48397-BSD	191-24-2	Benzo(g,h,i)perylene	BSD	RPD	3	%	30
OP48397-BSD	207-08-9	Benzo(k)fluoranthene	BSD	REC	89	%	40-140
OP48397-BSD	207-08-9	Benzo(k)fluoranthene	BSD	RPD	0	%	30
OP48397-BSD	101-55-3	4-Bromophenyl phenyl ether	BSD	REC	79	%	40-140
OP48397-BSD	101-55-3	4-Bromophenyl phenyl ether	BSD	RPD	8	%	30
OP48397-BSD	85-68-7	Butyl benzyl phthalate	BSD	REC	99	%	40-140
OP48397-BSD	85-68-7	Butyl benzyl phthalate	BSD	RPD	2	%	30

* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP48397-BSD	91-58-7	2-Chloronaphthalene	BSD	REC	62	%	40-140
OP48397-BSD	91-58-7	2-Chloronaphthalene	BSD	RPD	10	%	30
OP48397-BSD	106-47-8	4-Chloroaniline	BSD	REC	42	%	40-140
OP48397-BSD	106-47-8	4-Chloroaniline	BSD	RPD	15	%	30
OP48397-BSD	218-01-9	Chrysene	BSD	REC	90	%	40-140
OP48397-BSD	218-01-9	Chrysene	BSD	RPD	1	%	30
OP48397-BSD	111-91-1	bis(2-Chloroethoxy)methane	BSD	REC	51	%	40-140
OP48397-BSD	111-91-1	bis(2-Chloroethoxy)methane	BSD	RPD	7	%	30
OP48397-BSD	111-44-4	bis(2-Chloroethyl)ether	BSD	REC	43	%	40-140
OP48397-BSD	111-44-4	bis(2-Chloroethyl)ether	BSD	RPD	10	%	30
OP48397-BSD	108-60-1	bis(2-Chloroisopropyl)ether	BSD	REC	54	%	40-140
OP48397-BSD	108-60-1	bis(2-Chloroisopropyl)ether	BSD	RPD	9	%	30
OP48397-BSD	95-50-1	1,2-Dichlorobenzene	BSD	REC	46	%	40-140
OP48397-BSD	95-50-1	1,2-Dichlorobenzene	BSD	RPD	12	%	30
OP48397-BSD	122-66-7	1,2-Diphenylhydrazine	BSD	REC	74	%	40-140
OP48397-BSD	122-66-7	1,2-Diphenylhydrazine	BSD	RPD	8	%	30
OP48397-BSD	541-73-1	1,3-Dichlorobenzene	BSD	REC	46	%	40-140
OP48397-BSD	541-73-1	1,3-Dichlorobenzene	BSD	RPD	11	%	30
OP48397-BSD	106-46-7	1,4-Dichlorobenzene	BSD	REC	44	%	40-140
OP48397-BSD	106-46-7	1,4-Dichlorobenzene	BSD	RPD	13	%	30
OP48397-BSD	121-14-2	2,4-Dinitrotoluene	BSD	REC	85	%	40-140
OP48397-BSD	121-14-2	2,4-Dinitrotoluene	BSD	RPD	7	%	30
OP48397-BSD	606-20-2	2,6-Dinitrotoluene	BSD	REC	79	%	40-140
OP48397-BSD	606-20-2	2,6-Dinitrotoluene	BSD	RPD	12	%	30
OP48397-BSD	91-94-1	3,3'-Dichlorobenzidine	BSD	REC	86	%	40-140
OP48397-BSD	91-94-1	3,3'-Dichlorobenzidine	BSD	RPD	3	%	30
OP48397-BSD	53-70-3	Dibenzo(a,h)anthracene	BSD	REC	85	%	40-140
OP48397-BSD	53-70-3	Dibenzo(a,h)anthracene	BSD	RPD	3	%	30
OP48397-BSD	132-64-9	Dibenzofuran	BSD	REC	67	%	40-140
OP48397-BSD	132-64-9	Dibenzofuran	BSD	RPD	10	%	30
OP48397-BSD	84-74-2	Di-n-butyl phthalate	BSD	REC	96	%	40-140
OP48397-BSD	84-74-2	Di-n-butyl phthalate	BSD	RPD	1	%	30
OP48397-BSD	117-84-0	Di-n-octyl phthalate	BSD	REC	103	%	40-140
OP48397-BSD	117-84-0	Di-n-octyl phthalate	BSD	RPD	2	%	30
OP48397-BSD	84-66-2	Diethyl phthalate	BSD	REC	83	%	40-140
OP48397-BSD	84-66-2	Diethyl phthalate	BSD	RPD	6	%	30
OP48397-BSD	131-11-3	Dimethyl phthalate	BSD	REC	77	%	40-140
OP48397-BSD	131-11-3	Dimethyl phthalate	BSD	RPD	10	%	30
OP48397-BSD	117-81-7	bis(2-Ethylhexyl)phthalate	BSD	REC	103	%	40-140
OP48397-BSD	117-81-7	bis(2-Ethylhexyl)phthalate	BSD	RPD	3	%	30
OP48397-BSD	206-44-0	Fluoranthene	BSD	REC	89	%	40-140
OP48397-BSD	206-44-0	Fluoranthene	BSD	RPD	3	%	30
OP48397-BSD	86-73-7	Fluorene	BSD	REC	76	%	40-140
OP48397-BSD	86-73-7	Fluorene	BSD	RPD	11	%	30
OP48397-BSD	118-74-1	Hexachlorobenzene	BSD	REC	85	%	40-140

* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP48397-BSD	118-74-1	Hexachlorobenzene	BSD	RPD	8	%	30
OP48397-BSD	87-68-3	Hexachlorobutadiene	BSD	REC	41	%	40-140
OP48397-BSD	87-68-3	Hexachlorobutadiene	BSD	RPD	12	%	30
OP48397-BSD	77-47-4	Hexachlorocyclopentadiene	BSD	REC	8 [b]	%	40-140
OP48397-BSD	77-47-4	Hexachlorocyclopentadiene	BSD	RPD	13	%	30
OP48397-BSD	67-72-1	Hexachloroethane	BSD	REC	42	%	40-140
OP48397-BSD	67-72-1	Hexachloroethane	BSD	RPD	14	%	30
OP48397-BSD	193-39-5	Indeno(1,2,3-cd)pyrene	BSD	REC	83	%	40-140
OP48397-BSD	193-39-5	Indeno(1,2,3-cd)pyrene	BSD	RPD	0	%	30
OP48397-BSD	78-59-1	Isophorone	BSD	REC	54	%	40-140
OP48397-BSD	78-59-1	Isophorone	BSD	RPD	7	%	30
OP48397-BSD	91-57-6	2-Methylnaphthalene	BSD	REC	51	%	40-140
OP48397-BSD	91-57-6	2-Methylnaphthalene	BSD	RPD	6	%	30
OP48397-BSD	91-20-3	Naphthalene	BSD	REC	69	%	40-140
OP48397-BSD	91-20-3	Naphthalene	BSD	RPD	0	%	30
OP48397-BSD	98-95-3	Nitrobenzene	BSD	REC	43	%	40-140
OP48397-BSD	98-95-3	Nitrobenzene	BSD	RPD	5	%	30
OP48397-BSD	621-64-7	N-Nitroso-di-n-propylamine	BSD	REC	60	%	40-140
OP48397-BSD	621-64-7	N-Nitroso-di-n-propylamine	BSD	RPD	3	%	30
OP48397-BSD	86-30-6	N-Nitrosodiphenylamine	BSD	REC	81	%	40-140
OP48397-BSD	86-30-6	N-Nitrosodiphenylamine	BSD	RPD	6	%	30
OP48397-BSD	85-01-8	Phenanthrene	BSD	REC	86	%	40-140
OP48397-BSD	85-01-8	Phenanthrene	BSD	RPD	7	%	30
OP48397-BSD	129-00-0	Pyrene	BSD	REC	99	%	40-140
OP48397-BSD	129-00-0	Pyrene	BSD	RPD	1	%	30
OP48397-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	REC	44	%	40-140
OP48397-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	RPD	9	%	30
OP48397-BSD	367-12-4	2-Fluorophenol	BSD	SURR	38	%	30-130
OP48397-BSD	4165-62-2	Phenol-d5	BSD	SURR	44	%	30-130
OP48397-BSD	118-79-6	2,4,6-Tribromophenol	BSD	SURR	74	%	30-130
OP48397-BSD	4165-60-0	Nitrobenzene-d5	BSD	SURR	40	%	30-130
OP48397-BSD	321-60-8	2-Fluorobiphenyl	BSD	SURR	51	%	30-130
OP48397-BSD	1718-51-0	Terphenyl-d14	BSD	SURR	78	%	30-130
OP48397-MB	367-12-4	2-Fluorophenol	MB	SURR	65	%	30-130
OP48397-MB	4165-62-2	Phenol-d5	MB	SURR	67	%	30-130
OP48397-MB	118-79-6	2,4,6-Tribromophenol	MB	SURR	74	%	30-130
OP48397-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	59	%	30-130
OP48397-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	66	%	30-130
OP48397-MB	1718-51-0	Terphenyl-d14	MB	SURR	79	%	30-130
MC47231-6	367-12-4	2-Fluorophenol	SAMP	SURR	52	%	30-130
MC47231-6	4165-62-2	Phenol-d5	SAMP	SURR	55	%	30-130
MC47231-6	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	77	%	30-130
MC47231-6	4165-60-0	Nitrobenzene-d5	SAMP	SURR	50	%	30-130
MC47231-6	321-60-8	2-Fluorobiphenyl	SAMP	SURR	60	%	30-130
MC47231-6	1718-51-0	Terphenyl-d14	SAMP	SURR	79	%	30-130

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* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MC47231-7	367-12-4	2-Fluorophenol	SAMP	SURR	41	%	30-130
MC47231-7	4165-62-2	Phenol-d5	SAMP	SURR	50	%	30-130
MC47231-7	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	61	%	30-130
MC47231-7	4165-60-0	Nitrobenzene-d5	SAMP	SURR	43	%	30-130
MC47231-7	321-60-8	2-Fluorobiphenyl	SAMP	SURR	55	%	30-130
MC47231-7	1718-51-0	Terphenyl-d14	SAMP	SURR	77	%	30-130
MC47231-8	367-12-4	2-Fluorophenol	SAMP	SURR	41	%	30-130
MC47231-8	4165-62-2	Phenol-d5	SAMP	SURR	50	%	30-130
MC47231-8	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	56	%	30-130
MC47231-8	4165-60-0	Nitrobenzene-d5	SAMP	SURR	42	%	30-130
MC47231-8	321-60-8	2-Fluorobiphenyl	SAMP	SURR	54	%	30-130
MC47231-8	1718-51-0	Terphenyl-d14	SAMP	SURR	73	%	30-130
OP48393	SW846 8082A						
OP48393-BS	12674-11-2	Aroclor 1016	BSP	REC	87	%	40-140
OP48393-BS	11096-82-5	Aroclor 1260	BSP	REC	86	%	40-140
OP48393-BS	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	97	%	30-150
OP48393-BS	877-09-8	Tetrachloro-m-xylene (sig#2)	BSP	SURR	86	%	30-150
OP48393-BS	2051-24-3	Decachlorobiphenyl (sig#1)	BSP	SURR	93	%	30-150
OP48393-BS	2051-24-3	Decachlorobiphenyl (sig#2)	BSP	SURR	89	%	30-150
OP48393-BSD	12674-11-2	Aroclor 1016	BSD	REC	90	%	40-140
OP48393-BSD	12674-11-2	Aroclor 1016	BSD	RPD	5	%	30
OP48393-BSD	11104-28-2	Aroclor 1221	BSD	RPD	0	%	30
OP48393-BSD	11141-16-5	Aroclor 1232	BSD	RPD	0	%	30
OP48393-BSD	53469-21-9	Aroclor 1242	BSD	RPD	0	%	30
OP48393-BSD	12672-29-6	Aroclor 1248	BSD	RPD	0	%	30
OP48393-BSD	11097-69-1	Aroclor 1254	BSD	RPD	0	%	30
OP48393-BSD	11096-82-5	Aroclor 1260	BSD	REC	88	%	40-140
OP48393-BSD	11096-82-5	Aroclor 1260	BSD	RPD	4	%	30
OP48393-BSD	37324-23-5	Aroclor 1262	BSD	RPD	0	%	30
OP48393-BSD	11100-14-4	Aroclor 1268	BSD	RPD	0	%	30
OP48393-BSD	877-09-8	Tetrachloro-m-xylene (sig#1)	BSD	SURR	101	%	30-150
OP48393-BSD	877-09-8	Tetrachloro-m-xylene (sig#2)	BSD	SURR	95	%	30-150
OP48393-BSD	2051-24-3	Decachlorobiphenyl (sig#1)	BSD	SURR	99	%	30-150
OP48393-BSD	2051-24-3	Decachlorobiphenyl (sig#2)	BSD	SURR	100	%	30-150
OP48393-MB	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	98	%	30-150
OP48393-MB	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	99	%	30-150
OP48393-MB	2051-24-3	Decachlorobiphenyl (sig#1)	MB	SURR	98	%	30-150
OP48393-MB	2051-24-3	Decachlorobiphenyl (sig#2)	MB	SURR	105	%	30-150
MC47231-6	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	93	%	30-150
MC47231-6	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	105	%	30-150
MC47231-6	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	99	%	30-150
MC47231-6	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	126	%	30-150
MC47231-7	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	86	%	30-150

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* Sample used for QC is not from job MC47231

QC Evaluation: MA MCP Limits

Job Number: MC47231
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/08/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MC47231-7	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	89	%	30-150
MC47231-7	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	96	%	30-150
MC47231-7	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	115	%	30-150
MC47231-8	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	92	%	30-150
MC47231-8	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	85	%	30-150
MC47231-8	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	102	%	30-150
MC47231-8	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	134	%	30-150

(a) Outside control limits Associated samples are non-detect for this compound
(b) Outside control limits Refer to Blank Spike

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* Sample used for QC is not from job MC47231

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

6

Method Blank Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2873-MB	M80302 D	1	08/11/16	KP	n/a	n/a	MSM2873

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/kg	
71-43-2	Benzene	ND	0 50	ug/kg	
108-86-1	Bromobenzene	ND	5 0	ug/kg	
74-97-5	Bromochloromethane	ND	5 0	ug/kg	
75-27-4	Bromodichloromethane	ND	2 0	ug/kg	
75-25-2	Bromoform	ND	2 0	ug/kg	
74-83-9	Bromomethane	ND	2 0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	ug/kg	
104-51-8	n-Butylbenzene	ND	5 0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5 0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5 0	ug/kg	
75-15-0	Carbon disulfide	ND	5 0	ug/kg	
56-23-5	Carbon tetrachloride	ND	2 0	ug/kg	
108-90-7	Chlorobenzene	ND	2 0	ug/kg	
75-00-3	Chloroethane	ND	5 0	ug/kg	
67-66-3	Chloroform	ND	2 0	ug/kg	
74-87-3	Chloromethane	ND	5 0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5 0	ug/kg	
106-43-4	p-Chlorotoluene	ND	5 0	ug/kg	
108-20-3	Di-Isopropyl ether	ND	2 0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5 0	ug/kg	
124-48-1	Dibromochloromethane	ND	2 0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2 0	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2 0	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2 0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2 0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2 0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2 0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2 0	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2 0	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2 0	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2 0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2 0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5 0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5 0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5 0	ug/kg	

Method Blank Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2873-MB	M80302 D	1	08/11/16	KP	n/a	n/a	MSM2873

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	2 0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2 0	ug/kg	
123-91-1	1,4-Dioxane	ND	130	ug/kg	
60-29-7	Ethyl Ether	ND	5 0	ug/kg	
100-41-4	Ethylbenzene	ND	2 0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5 0	ug/kg	
591-78-6	2-Hexanone	ND	10	ug/kg	
98-82-8	Isopropylbenzene	ND	5 0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5 0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2 0	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5 0	ug/kg	
74-95-3	Methylene bromide	ND	5 0	ug/kg	
75-09-2	Methylene chloride	ND	2 0	ug/kg	
91-20-3	Naphthalene	ND	5 0	ug/kg	
103-65-1	n-Propylbenzene	ND	5 0	ug/kg	
100-42-5	Styrene	ND	5 0	ug/kg	
994-05-8	tert-Amyl Methyl Ether	ND	5 0	ug/kg	
637-92-3	tert-Butyl Ethyl Ether	ND	2 0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5 0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2 0	ug/kg	
127-18-4	Tetrachloroethene	ND	2 0	ug/kg	
109-99-9	Tetrahydrofuran	ND	10	ug/kg	
108-88-3	Toluene	1 0	5 0	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	5 0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5 0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2 0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2 0	ug/kg	
79-01-6	Trichloroethene	ND	2 0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2 0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5 0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5 0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5 0	ug/kg	
75-01-4	Vinyl chloride	ND	2 0	ug/kg	
	m,p-Xylene	ND	2 0	ug/kg	
95-47-6	o-Xylene	ND	2 0	ug/kg	
1330-20-7	Xylene (total)	ND	2 0	ug/kg	

Method Blank Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2873-MB	M80302 D	1	08/11/16	KP	n/a	n/a	MSM2873

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47231-6, MC47231-7, MC47231-8

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	65-141%
2037-26-5	Toluene-D8	102%	65-129%
460-00-4	4-Bromofluorobenzene	103%	63-137%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2873-BS	M80299 D	1	08/11/16	KP	n/a	n/a	MSM2873
MSM2873-BSD	M80300 D	1	08/11/16	KP	n/a	n/a	MSM2873

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	58 6	117	54 7	109	7	24-179/25
71-43-2	Benzene	50	53 3	107	54 3	109	2	73-115/25
108-86-1	Bromobenzene	50	49 8	100	50 0	100	0	76-121/25
74-97-5	Bromochloromethane	50	56 4	113	56.1	112	1	76-129/25
75-27-4	Bromodichloromethane	50	48 9	98	49.6	99	1	76-122/25
75-25-2	Bromoform	50	48 4	97	48 8	98	1	67-151/25
74-83-9	Bromomethane	50	56.6	113	55 8	112	1	52-139/25
78-93-3	2-Butanone (MEK)	50	57 6	115	52 0	104	10	32-151/25
104-51-8	n-Butylbenzene	50	48 4	97	48 5	97	0	71-124/25
135-98-8	sec-Butylbenzene	50	48 4	97	48 7	97	1	71-124/25
98-06-6	tert-Butylbenzene	50	49 1	98	49 5	99	1	66-125/25
75-15-0	Carbon disulfide	50	69 2	138	68 2	136	1	57-143/25
56-23-5	Carbon tetrachloride	50	53 3	107	53 9	108	1	73-129/25
108-90-7	Chlorobenzene	50	50 2	100	50 5	101	1	79-123/25
75-00-3	Chloroethane	50	53 9	108	52 9	106	2	51-159/25
67-66-3	Chloroform	50	51 1	102	51 7	103	1	72-122/25
74-87-3	Chloromethane	50	53 1	106	52 4	105	1	57-143/25
95-49-8	o-Chlorotoluene	50	48 1	96	48 8	98	1	68-121/25
106-43-4	p-Chlorotoluene	50	48 0	96	48 0	96	0	68-119/25
108-20-3	Di-Isopropyl ether	50	52 5	105	52 8	106	1	63-142/25
96-12-8	1,2-Dibromo-3-ehloropropane	50	47 7	95	46 9	94	2	52-132/25
124-48-1	Dibromoehloromethane	50	49 1	98	49 8	100	1	74-139/25
106-93-4	1,2-Dibromoethane	50	51 0	102	51 2	102	0	76-130/25
95-50-1	1,2-Diehlorobenzene	50	48 5	97	49 1	98	1	73-122/25
541-73-1	1,3-Diehlorobenzene	50	47 7	95	48 7	97	2	74-119/25
106-46-7	1,4-Diehlorobenzene	50	47 0	94	47 6	95	1	75-118/25
75-71-8	Dichlorodifluoromethane	50	53 2	106	52.0	104	2	11-183/25
75-34-3	1,1-Diehloroethane	50	53 1	106	53 3	107	0	70-128/25
107-06-2	1,2-Diehloroethane	50	51 8	104	52 5	105	1	70-126/25
75-35-4	1,1-Diehloroethene	50	64 5	129	64 6	129	0	71-136/25
156-59-2	cis-1,2-Diehloroethene	50	55 6	111	56 3	113	1	78-128/25
156-60-5	trans-1,2-Dichloroethene	50	54 7	109	54 4	109	1	71-131/25
78-87-5	1,2-Diehloropropane	50	50 3	101	51 1	102	2	79-124/25
142-28-9	1,3-Diehloropropane	50	52 2	104	52 3	105	0	78-128/25
594-20-7	2,2-Diehloropropane	50	52 4	105	51 9	104	1	54-145/25
563-58-6	1,1-Diehloropropene	50	54 9	110	55 8	112	2	67-125/25

* = Outside of Control Limits

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2873-BS	M80299 D	1	08/11/16	KP	n/a	n/a	MSM2873
MSM2873-BSD	M80300 D	1	08/11/16	KP	n/a	n/a	MSM2873

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	49 2	98	49 5	99	1	75-126/25
10061-02-6	trans-1,3-Dichloropropene	50	46.1	92	47 0	94	2	75-128/25
123-91-1	1,4-Dioxane	250	292	117	278	111	5	48-156/25
60-29-7	Ethyl Ether	50	58 9	118	59 7	119	1	68-141/25
100-41-4	Ethylbenzene	50	51 4	103	51.9	104	1	76-122/25
87-68-3	Hexachlorobutadiene	50	48 1	96	48 4	97	1	73-137/25
591-78-6	2-Hexanone	50	53 9	108	50 5	101	7	26-169/25
98-82-8	Isopropylbenzene	50	48 3	97	48 4	97	0	69-124/25
99-87-6	p-Isopropyltoluene	50	49 1	98	49 8	100	1	73-124/25
1634-04-4	Methyl Tert Butyl Ether	50	53 8	108	53 9	108	0	58-133/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47 2	94	46 3	93	2	43-166/25
74-95-3	Methylene bromide	50	50 3	101	51 0	102	1	76-125/25
75-09-2	Methylene chloride	50	63 4	127* [a]	63 4	127* [a]	0	74-125/25
91-20-3	Naphthalene	50	44 1	88	44 2	88	0	39-158/25
103-65-1	n-Propylbenzene	50	46 7	93	46 8	94	0	69-121/25
100-42-5	Styrene	50	51 0	102	51 8	104	2	79-124/25
994-05-8	tert-Amyl Methyl Ether	50	50.8	102	51 6	103	2	32-153/25
637-92-3	tert-Butyl Ethyl Ether	50	50.4	101	50 6	101	0	41-147/25
630-20-6	1,1,1,2-Tetrachloroethane	50	50 9	102	51 9	104	2	75-136/25
79-34-5	1,1,2,2-Tetrachloroethane	50	48 4	97	47 3	95	2	66-134/25
127-18-4	Tetrachloroethene	50	51 3	103	51 4	103	0	76-125/25
109-99-9	Tetrahydrofuran	50	51 3	103	47 6	95	7	34-177/25
108-88-3	Toluene	50	51 8	104	51 8	104	0	76-119/25
87-61-6	1,2,3-Trichlorobenzene	50	47.6	95	48 5	97	2	52-146/25
120-82-1	1,2,4-Trichlorobenzene	50	46 4	93	47 4	95	2	66-133/25
71-55-6	1,1,1-Trichloroethane	50	53 8	108	53 8	108	0	70-130/25
79-00-5	1,1,2-Trichloroethane	50	50.4	101	50 3	101	0	75-124/25
79-01-6	Trichloroethene	50	52 0	104	52 1	104	0	74-127/25
75-69-4	Trichlorofluoromethane	50	48 5	97	47 8	96	1	48-156/25
96-18-4	1,2,3-Trichloropropane	50	46 7	93	45 8	92	2	65-130/25
95-63-6	1,2,4-Trimethylbenzene	50	48 5	97	49 1	98	1	69-119/25
108-67-8	1,3,5-Trimethylbenzene	50	50 8	102	51 0	102	0	69-123/25
75-01-4	Vinyl chloride	50	45 4	91	44 8	90	1	33-166/25
	m,p-Xylene	100	103	103	104	104	1	78-122/25
95-47-6	o-Xylene	50	51 2	102	52 0	104	2	77-123/25
1330-20-7	Xylene (total)	150	154	103	156	104	1	78-122/25

* = Outside of Control Limits

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2873-BS	M80299 D	1	08/11/16	KP	n/a	n/a	MSM2873
MSM2873-BSD	M80300 D	1	08/11/16	KP	n/a	n/a	MSM2873

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47231-6, MC47231-7, MC47231-8

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	102%	101%	65-141%
2037-26-5	Toluene-D8	100%	100%	65-129%
460-00-4	4-Bromofluorobenzene	96%	96%	63-137%

(a) Outside control limits Associated samples are non-detect for this compound

* = Outside of Control Limits

Volatile Internal Standard Area Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Check Std:	MSM2873-CC2872	**Injection Date:**	08/11/16
Lab File ID:	M80298 D	**Injection Time:**	09 52
Instrument ID:	GCMSM	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	50141	9 77	81864	10 68	37908	13 90	44160	16 49	32197	7 69
Upper Limit [a]	100282	10 27	163728	11 18	75816	14 40	88320	16 99	64394	8 19
Lower Limit [b]	25071	9 27	40932	10 18	18954	13 40	22080	15 99	16099	7 19
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
MSM2873-BS	50969	9 77	83653	10 67	38252	13 90	45379	16 49	34944	7 70
MSM2873-BSD	52379	9 77	84784	10 67	38481	13 90	45817	16 49	33161	7 69
MSM2873-MB	48770	9 78	79410	10.68	37309	13 91	40047	16 49	32837	7 69
ZZZZZZ	46155	9 78	75907	10 68	35461	13 91	40078	16 50	44243	7 70
ZZZZZZ	49759	9 78	81602	10 68	38068	13 90	41269	16 49	47761	7 68
ZZZZZZ	45137	9 78	75521	10.67	35550	13 90	39014	16 49	50812	7 69
ZZZZZZ	45711	9 77	75073	10 67	34734	13 91	36822	16 49	44699	7 68
ZZZZZZ	47418	9 78	77096	10 68	35946	13 90	38437	16 49	48158	7 69
MC47125-2	46190	9 78	75444	10 67	34706	13 90	39229	16 49	48349	7 68
ZZZZZZ	44002	9 77	72457	10 68	34162	13 90	37861	16 49	51235	7 68
ZZZZZZ	46585	9 78	77469	10 68	36999	13 90	40520	16 49	58175	7 68
MC47231-6	39386	9 77	64910	10.68	28719	13 90	27734	16 49	49305	7 69
MC47231-7	41828	9 78	68309	10 68	32092	13 90	34834	16 49	51352	7 68
MC47231-8	45994	9 78	77710	10 68	36106	13 90	39286	16 49	52539	7 68
ZZZZZZ	45586	9 78	75155	10 67	35250	13 90	33584	16 49	31952	7 68
ZZZZZZ	20599[c]	9 77	32144[c]	10 68	14131[c]	13 90	12567[c]	16 49	16117	7 68
ZZZZZZ	44943	9 77	72868	10 68	32934	13 90	34563	16 49	28864	7 69
ZZZZZZ	45595	9 78	74805	10 67	35053	13 90	37800	16 49	33724	7 69
ZZZZZZ	40968	9 77	65811	10.68	28380	13 90	26293	16 49	31261	7 68
MC47125-2MS	50680	9 78	81562	10.67	37604	13 90	46140	16 49	28745	7 70
MC47125-2MSD	51153	9 78	83038	10 68	38021	13 90	44553	16 49	29254	7 70

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area, Retention time + 0 5 minutes
(b) Lower Limit = -50% of check standard area, Retention time -0 5 minutes
(c) Outside control limits due to possible matrix interference Confirmed by reanalysis

6.3.1

Volatile Surrogate Recovery Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: SW846 8260C **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC47231-6	M80311 D	109	99	111
MC47231-7	M80312 D	107	99	103
MC47231-8	M80313 D	110	99	102
MSM2873-BS	M80299 D	102	100	96
MSM2873-BSD	M80300 D	101	100	96
MSM2873-MB	M80302 D	105	102	103

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	65-141%
S2 = Toluene-D8	65-129%
S3 = 4-Bromofluorobenzene	63-137%

6.4.1

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48397-MB	R49092 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	490	ug/kg	
95-57-8	2-Chlorophenol	ND	240	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	490	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	490	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	490	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	490	ug/kg	
95-48-7	2-Methylphenol	ND	490	ug/kg	
	3&4-Methylphenol	ND	490	ug/kg	
88-75-5	2-Nitrophenol	ND	490	ug/kg	
100-02-7	4-Nitrophenol	ND	490	ug/kg	
87-86-5	Pentachlorophenol	ND	490	ug/kg	
108-95-2	Phenol	ND	240	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	490	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	490	ug/kg	
83-32-9	Acenaphthene	ND	98	ug/kg	
208-96-8	Acenaphthylene	ND	98	ug/kg	
98-86-2	Acetophenone	ND	490	ug/kg	
62-53-3	Aniline	ND	490	ug/kg	
120-12-7	Anthracene	ND	98	ug/kg	
56-55-3	Benzo(a)anthracene	ND	98	ug/kg	
50-32-8	Benzo(a)pyrene	ND	240	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	98	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	98	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	98	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	240	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	240	ug/kg	
91-58-7	2-Chloronaphthalene	ND	240	ug/kg	
106-47-8	4-Chloroaniline	ND	490	ug/kg	
218-01-9	Chrysene	ND	98	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	240	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	240	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	240	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	240	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	240	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	240	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	240	ug/kg	

Method Blank Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48397-MB	R49092 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene	ND	490	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	490	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	490	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	98	ug/kg	
132-64-9	Dibenzofuran	ND	98	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	240	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	240	ug/kg	
84-66-2	Diethyl phthalate	ND	240	ug/kg	
131-11-3	Dimethyl phthalate	ND	240	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	240	ug/kg	
206-44-0	Fluoranthene	ND	98	ug/kg	
86-73-7	Fluorene	ND	98	ug/kg	
118-74-1	Hexachlorobenzene	ND	240	ug/kg	
87-68-3	Hexachlorobutadiene	ND	240	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	490	ug/kg	
67-72-1	Hexachloroethane	ND	240	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	240	ug/kg	
78-59-1	Isophorone	ND	240	ug/kg	
91-57-6	2-Methylnaphthalene	ND	98	ug/kg	
91-20-3	Naphthalene	ND	98	ug/kg	
98-95-3	Nitrobenzene	ND	240	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	240	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	240	ug/kg	
85-01-8	Phenanthrene	ND	98	ug/kg	
129-00-0	Pyrene	ND	98	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	240	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	65%	25-109%
4165-62-2	Phenol-d5	67%	29-113%
118-79-6	2,4,6-Tribromophenol	74%	20-141%
4165-60-0	Nitrobenzene-d5	59%	27-115%
321-60-8	2-Fluorobiphenyl	66%	34-118%
1718-51-0	Terphenyl-d14	79%	42-139%

7.1.1

7

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48397-BS	R49093 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817
OP48397-BSD	R49094 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	2440	1100	45	1030	41	7	10-136/30
95-57-8	2-Chlorophenol	2440	1110	46	1060	42	5	39-104/30
59-50-7	4-Chloro-3-methyl phenol	2440	1430	59	1590	64	11	51-110/30
120-83-2	2,4-Dichlorophenol	2440	1160	48	1330	53	14	47-109/30
105-67-9	2,4-Dimethylphenol	2440	1110	46	1220	49	9	43-105/30
51-28-5	2,4-Dinitrophenol	2440	1010	41	1070	43	6	10-130/30
95-48-7	2-Methylphenol	2440	1150	47	1230	49	7	40-105/30
	3&4-Methylphenol	4880	2120	43	2440	49	14	39-113/30
88-75-5	2-Nitrophenol	2440	1140	47	1150	46	1	41-112/30
100-02-7	4-Nitrophenol	2440	1710	70	1780	71	4	28-134/30
87-86-5	Pentachlorophenol	2440	1400	57	1400	56	0	22-123/30
108-95-2	Phenol	2440	1180	48	1250	50	6	40-107/30
95-95-4	2,4,5-Trichlorophenol	2440	1600	66	1770	71	10	54-115/30
88-06-2	2,4,6-Trichlorophenol	2440	1510	62	1650	66	9	51-110/30
83-32-9	Acenaphthene	2440	1550	64	1720	69	10	49-108/30
208-96-8	Acenaphthylene	2440	1230	50	1380	55	11	37-102/30
98-86-2	Acetophenone	2440	1080	44	1040	42	4	37-105/30
62-53-3	Aniline	2440	842	35	889	36	5	10-90/30
120-12-7	Anthracene	2440	1930	79	2060	83	7	54-111/30
56-55-3	Benzo(a)anthracene	2440	2350	96	2360	95	0	56-117/30
50-32-8	Benzo(a)pyrene	2440	2040	84	2050	82	0	57-117/30
205-99-2	Benzo(b)fluoranthene	2440	2250	92	2280	91	1	55-122/30
191-24-2	Benzo(g,h,i)perylene	2440	2130	87	2200	88	3	52-123/30
207-08-9	Benzo(k)fluoranthene	2440	2220	91	2210	89	0	54-117/30
101-55-3	4-Bromophenyl phenyl ether	2440	1820	75	1970	79	8	54-118/30
85-68-7	Butyl benzyl phthalate	2440	2520	103	2470	99	2	54-121/30
91-58-7	2-Chloronaphthalene	2440	1400	57	1540	62	10	46-114/30
106-47-8	4-Chloroaniline	2440	910	37	1060	42	15	12-88/30
218-01-9	Chrysene	2440	2230	91	2250	90	1	56-114/30
111-91-1	bis(2-Chloroethoxy)methane	2440	1190	49	1270	51	7	41-106/30
111-44-4	bis(2-Chloroethyl)ether	2440	1190	49	1080	43	10	28-113/30
108-60-1	bis(2-Chloroisopropyl)ether	2440	1470	60	1350	54	9	30-132/30
95-50-1	1,2-Dichlorobenzene	2440	1280	53	1140	46	12	34-100/30
122-66-7	1,2-Diphenylhydrazine	2440	1690	69	1840	74	8	43-117/30
541-73-1	1,3-Dichlorobenzene	2440	1270	52	1140	46	11	35-99/30
106-46-7	1,4-Dichlorobenzene	2440	1240	51	1090	44	13	35-98/30

* = Outside of Control Limits

7.2.1

7

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48397-BS	R49093 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817
OP48397-BSD	R49094 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
121-14-2	2,4-Dinitrotoluene	2440	1970	81	2110	85	7	50-121/30
606-20-2	2,6-Dinitrotoluene	2440	1750	72	1980	79	12	52-115/30
91-94-1	3,3'-Dichlorobenzidine	2440	2200	90	2140	86	3	17-120/30
53-70-3	Dibenzo(a,h)anthracene	2440	2060	85	2120	85	3	54-121/30
132-64-9	Dibenzofuran	2440	1520	62	1680	67	10	52-109/30
84-74-2	Di-n-butyl phthalate	2440	2360	97	2390	96	1	55-113/30
117-84-0	Di-n-octyl phthalate	2440	2610	107	2560	103	2	53-126/30
84-66-2	Diethyl phthalate	2440	1950	80	2080	83	6	54-111/30
131-11-3	Dimethyl phthalate	2440	1740	71	1920	77	10	53-111/30
117-81-7	bis(2-Ethylhexyl)phthalate	2440	2640	108	2560	103	3	55-125/30
206-44-0	Fluoranthene	2440	2160	89	2220	89	3	55-116/30
86-73-7	Fluorene	2440	1700	70	1900	76	11	52-111/30
118-74-1	Hexachlorobenzene	2440	1950	80	2110	85	8	52-117/30
87-68-3	Hexachlorobutadiene	2440	1150	47	1020	41	12	36-108/30
77-47-4	Hexachlorocyclopentadiene	2440	92 5	10	81 5	8* [a]	13	10-99/30
67-72-1	Hexachloroethane	2440	1210	50	1050	42	14	33-100/30
193-39-5	Indeno(1,2,3-cd)pyrene	2440	2060	85	2070	83	0	55-120/30
78-59-1	Isophorone	2440	1270	52	1360	54	7	37-101/30
91-57-6	2-Methylnaphthalene	2440	1210	50	1280	51	6	38-114/30
91-20-3	Naphthalene	2440	1730	71	1730	69	0	27-128/30
98-95-3	Nitrobenzene	2440	1140	47	1080	43	5	33-108/30
621-64-7	N-Nitroso-di-n-propylamine	2440	1460	60	1500	60	3	37-112/30
86-30-6	N-Nitrosodiphenylamine	2440	1910	78	2030	81	6	47-114/30
85-01-8	Phenanthrene	2440	2000	82	2140	86	7	54-112/30
129-00-0	Pyrene	2440	2500	103	2470	99	1	54-118/30
120-82-1	1,2,4-Trichlorobenzene	2440	1200	49	1100	44	9	38-105/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	42%	38%	25-109%
4165-62-2	Phenol-d5	43%	44%	29-113%
118-79-6	2,4,6-Tribromophenol	72%	74%	20-141%
4165-60-0	Nitrobenzene-d5	43%	40%	27-115%
321-60-8	2-Fluorobiphenyl	46%	51%	34-118%
1718-51-0	Terphenyl-d14	81%	78%	42-139%

* = Outside of Control Limits

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48397-BS	R49093 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817
OP48397-BSD	R49094 D	1	08/15/16	MR	08/10/16	OP48397	MSR1817

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47231-6, MC47231-7, MC47231-8

(a) Outside control limits Refer to Blank Spike

* = Outside of Control Limits

Semivolatile Internal Standard Area Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Check Std:	MSR1817-CC1770	**Injection Date:**	08/15/16
Lab File ID:	R49082 D	**Injection Time:**	10 24
Instrument ID:	GCMSR	**Method:**	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	368008	4 01	1340096	5 06	977904	6 59	1847538	7 87	2057964	10 74	1762487	13 88
Upper Limit [a]	736016	4 51	2680192	5 56	1955808	7 09	3695076	8 37	4115928	11 24	3524974	14 38
Lower Limit [b]	184004	3 51	670048	4 56	488952	6 09	923769	7 37	1028982	10 24	881244	13 38

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	395964	4 01	1405461	5 06	934706	6 58	1677784	7 87	1571769	10 74	1318815	13 89
ZZZZZZ	466487	4 01	1683606	5 06	1095401	6 58	1955562	7 87	1764841	10 74	1480308	13 89
ZZZZZZ	455368	4 01	1577904	5 06	1017278	6 59	1819069	7 87	1749883	10 74	1496771	13 91
ZZZZZZ	448800	4 01	1582111	5 06	1037599	6 59	1844686	7 87	1752845	10 74	1507104	13 91
OP48397-MB	238517	4 01	888281	5 06	614127	6 58	1236688	7 87	1335438	10 73	1166809	13 88
OP48397-BS	366502	4 01	1312820	5 06	894362	6 59	1680587	7 87	1693056	10 74	1419655	13 89
OP48397-BSD	312314	4 01	1141854	5 06	788946	6 59	1493654	7 87	1571634	10 74	1347908	13 89
OP48397-MS	248232	4 01	911137	5 06	637079	6 59	1232539	7 87	1348886	10 74	1159339	13 89
OP48397-MSD	286765	4 01	1052781	5 06	743858	6 59	1431836	7 87	1533622	10 74	1280314	13 89
MC47238-1	227857	4 01	810357	5 06	566995	6 58	1123340	7 87	1226649	10 73	1062168	13 88
MC47231-6	248877	4 01	908120	5 06	636597	6 58	1238856	7 87	1274855	10 74	1075046	13 89
MC47231-7	232996	4 01	843769	5 06	589656	6 59	1154516	7 87	1234025	10 74	1062669	13 89
MC47231-8	354736	4 01	1267850	5 06	866319	6 59	1639129	7 87	1658426	10 74	1359989	13 90
ZZZZZZ	234468	4 01	852697	5 06	588313	6 58	1173056	7 87	1269011	10 74	1093316	13 89
ZZZZZZ	221309	4 01	809452	5 06	565707	6 59	1122373	7 87	1214433	10 73	1031758	13 88
ZZZZZZ	210968	4 01	768962	5 06	529948	6 58	1046671	7 87	1161573	10 74	997550	13 88
ZZZZZZ	231863	4 01	832706	5 06	598507	6 58	1194479	7 87	1279312	10 73	1083201	13 88
ZZZZZZ	280369	4 01	1030966	5 06	707159	6 59	1324327	7 87	1309386	10 74	1104559	13 89

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area, Retention time + 0 5 minutes
(b) Lower Limit = -50% of check standard area, Retention time -0 5 minutes

7.3.1

7

Semivolatile Surrogate Recovery Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC47231-6	R49098 D	52	55	77	50	60	79
MC47231-7	R49099 D	41	50	61	43	55	77
MC47231-8	R49100 D	41	50	56	42	54	73
OP48397-BS	R49093 D	42	43	72	43	46	81
OP48397-BSD	R49094 D	38	44	74	40	51	78
OP48397-MB	R49092 D	65	67	74	59	66	79

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	25-109%
S2 = Phenol-d5	29-113%
S3 = 2,4,6-Tribromophenol	20-141%
S4 = Nitrobenzene-d5	27-115%
S5 = 2-Fluorobiphenyl	34-118%
S6 = Terphenyl-d14	42-139%

7.4.1

7

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GAB5238-MB	AB94908 D	1	08/10/16	AF	n/a	n/a	GAB5238

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1 1

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	250	ug/kg	
100-41-4	Ethylbenzene	ND	250	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	ug/kg	
91-20-3	Naphthalene	ND	250	ug/kg	
108-88-3	Toluene	ND	250	ug/kg	
	m,p-Xylene	ND	250	ug/kg	
95-47-6	o-Xylene	ND	250	ug/kg	
	C5- C8 Aliphatics (Unadj)	ND	5000	ug/kg	
	C9- C12 Aliphatics (Unadj)	1100	5000	ug/kg	J
	C9- C10 Aromatics (Unadj.)	1370	5000	ug/kg	J
	C5- C8 Aliphatics	ND	5000	ug/kg	
	C9- C12 Aliphatics	ND	5000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
	2,3,4-Trifluorotoluene	91%	70-130%
	2,3,4-Trifluorotoluene	92%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GAB5238-BSP	AB94909.D	1	08/10/16	AF	n/a	n/a	GAB5238
GAB5238-BSD	AB94910.D	1	08/10/16	AF	n/a	n/a	GAB5238

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2500	2650	106	2600	104	2	70-130/25
100-41-4	Ethylbenzene	2500	2650	106	2590	104	2	70-130/25
1634-04-4	Methyl Tert Butyl Ether	2500	2630	105	2620	105	0	70-130/25
91-20-3	Naphthalene	2500	2630	105	2650	106	1	70-130/25
108-88-3	Toluene	2500	2700	108	2650	106	2	70-130/25
	m,p-Xylene	5000	5670	113	5540	111	2	70-130/25
95-47-6	o-Xylene	2500	2670	107	2640	106	1	70-130/25
	C5- C8 Aliphatics (Unadj.)	7500	7160	95	6900	92	4	70-130/25
	C9- C12 Aliphatics (Unadj.)	7500	7450	99	7470	100	0	70-130/25
	C9- C10 Aromatics (Unadj.)	2500	2710	108	2650	106	2	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	2,3,4-Trifluorotoluene	102%	100%	70-130%
	2,3,4-Trifluorotoluene	101%	99%	70-130%

* = Outside of Control Limits

8.2.1

Volatile Surrogate Recovery Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: MADEP VPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC47231-6	AB94911.D	98	98
MC47231-7	AB94912.D	106	106
MC47231-8	AB94913.D	95	95
GAB5238-BSD	AB94910.D	100	99
GAB5238-BSP	AB94909.D	102	101
GAB5238-MB	AB94908.D	91	92

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	70-130%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.3.1

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48394-MB	DE15249.D	1	08/15/16	TA	08/10/16	OP48394	GDE851

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC47231-1, MC47231-2, MC47231-3, MC47231-4, MC47231-5, MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	430	ug/kg	
208-96-8	Acenaphthylene	ND	430	ug/kg	
120-12-7	Anthracene	ND	430	ug/kg	
56-55-3	Benzo(a)anthracene	ND	430	ug/kg	
50-32-8	Benzo(a)pyrene	ND	430	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	430	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	430	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	430	ug/kg	
218-01-9	Chrysene	ND	430	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	430	ug/kg	
206-44-0	Fluoranthene	ND	430	ug/kg	
86-73-7	Fluorene	ND	430	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	430	ug/kg	
91-57-6	2-Methylnaphthalene	ND	430	ug/kg	
91-20-3	Naphthalene	ND	430	ug/kg	
85-01-8	Phenanthrene	ND	430	ug/kg	
129-00-0	Pyrene	ND	430	ug/kg	
	C11-C22 Aromatics (Unadj.)	ND	17000	ug/kg	
	C9-C18 Aliphatics	ND	8500	ug/kg	
	C19-C36 Aliphatics	ND	17000	ug/kg	
	C11-C22 Aromatics	ND	17000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	83%	40-140%
321-60-8	2-Fluorobiphenyl	83%	40-140%
580-13-2	2-Bromonaphthalene	95%	40-140%
3386-33-2	1-Chlorooctadecane	88%	40-140%

Method Blank Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48393-MB	BK60705 D	1	08/13/16	NK	08/10/16	OP48393	GBK1908

The QC reported here applies to the following samples: **Method:** SW846 8082A

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	31	ug/kg	
11104-28-2	Aroclor 1221	ND	31	ug/kg	
11141-16-5	Aroclor 1232	ND	31	ug/kg	
53469-21-9	Aroclor 1242	ND	31	ug/kg	
12672-29-6	Aroclor 1248	ND	31	ug/kg	
11097-69-1	Aroclor 1254	ND	31	ug/kg	
11096-82-5	Aroclor 1260	ND	31	ug/kg	
37324-23-5	Aroclor 1262	ND	31	ug/kg	
11100-14-4	Aroclor 1268	ND	31	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	98%	25-145%
877-09-8	Tetrachloro-m-xylene	99%	25-145%
2051-24-3	Decachlorobiphenyl	98%	25-179%
2051-24-3	Decachlorobiphenyl	105%	25-179%

9.1.2

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48394-BS	DE15246 D	1	08/15/16	TA	08/10/16	OP48394	GDE851
OP48394-BSD	DE15247 D	1	08/15/16	TA	08/10/16	OP48394	GDE851

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1 1

MC47231-1, MC47231-2, MC47231-3, MC47231-4, MC47231-5, MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	4180	2690	64	2690	61	0	40-140/25
208-96-8	Acenaphthylene	4180	2530	61	2540	58	0	40-140/25
120-12-7	Anthracene	4180	2880	69	2810	64	2	40-140/25
56-55-3	Benzo(a)anthracene	4180	3510	84	3360	76	4	40-140/25
50-32-8	Benzo(a)pyrene	4180	3280	78	3130	71	5	40-140/25
205-99-2	Benzo(b)fluoranthene	4180	3320	79	3250	74	2	40-140/25
191-24-2	Benzo(g,h,i)perylene	4180	3430	82	3340	76	3	40-140/25
207-08-9	Benzo(k)fluoranthene	4180	3390	81	3260	74	4	40-140/25
218-01-9	Chrysene	4180	3190	76	3120	71	2	40-140/25
53-70-3	Dibenz(a,h)anthracene	4180	3410	82	3320	75	3	40-140/25
206-44-0	Fluoranthene	4180	3410	82	3280	74	4	40-140/25
86-73-7	Fluorene	4180	2900	69	2880	65	1	40-140/25
193-39-5	Indeno(1,2,3-cd)pyrene	4180	3440	82	3320	75	4	40-140/25
91-57-6	2-Methylnaphthalene	4180	2590	62	2610	59	1	40-140/25
91-20-3	Naphthalene	4180	2070	50	2100	48	1	40-140/25
85-01-8	Phenanthrene	4180	3240	78	3150	71	3	40-140/25
129-00-0	Pyrene	4180	3380	81	3230	73	5	40-140/25
	C11-C22 Aromatics (Unadj)	66900	58700	88	58100	82	1	40-140/25
	C9-C18 Aliphatics	25100	14800	59	17900	68	19	40-140/25
	C19-C36 Aliphatics	33400	26100	78	31400	89	18	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	92%	81%	40-140%
321-60-8	2-Fluorobiphenyl	93%	85%	40-140%
580-13-2	2-Bromonaphthalene	94%	84%	40-140%
3386-33-2	1-Chlorooctadecane	90%	99%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP48394-BS	2-Methylnaphthalene	2590	ND	0 0%	5 0
OP48394-BS	Naphthalene	2070	ND	0 0%	5 0
OP48394-BSD	2-Methylnaphthalene	2610	ND	0 0%	5 0
OP48394-BSD	Naphthalene	2100	ND	0 0%	5 0

* = Outside of Control Limits

9.2.1

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48393-BS	BK60706 D	1	08/13/16	NK	08/10/16	OP48393	GBK1908
OP48393-BSD	BK60707 D	1	08/13/16	NK	08/10/16	OP48393	GBK1908

The QC reported here applies to the following samples: **Method:** SW846 8082A

MC47231-6, MC47231-7, MC47231-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	256	223	87	235	90	5	47-144/30
11104-28-2	Aroclor 1221		ND		ND		nc	40-140/30
11141-16-5	Aroclor 1232		ND		ND		nc	40-140/30
53469-21-9	Aroclor 1242		ND		ND		nc	40-140/30
12672-29-6	Aroclor 1248		ND		ND		nc	40-140/30
11097-69-1	Aroclor 1254		ND		ND		nc	40-140/30
11096-82-5	Aroclor 1260	256	221	86	231	88	4	45-156/30
37324-23-5	Aroclor 1262		ND		ND		nc	40-140/30
11100-14-4	Aroclor 1268		ND		ND		nc	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	97%	101%	25-145%
877-09-8	Tetrachloro-m-xylene	86%	95%	25-145%
2051-24-3	Decachlorobiphenyl	93%	99%	25-179%
2051-24-3	Decachlorobiphenyl	89%	100%	25-179%

* = Outside of Control Limits

9.2.2

Semivolatile Surrogate Recovery Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: SW846 8082A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
MC47231-6	BK60724 D	93	105	99	126
MC47231-7	BK60725 D	86	89	96	115
MC47231-8	BK60726 D	92	85	102	134
OP48393-BS	BK60706 D	97	86	93	89
OP48393-BSD	BK60707 D	101	95	99	100
OP48393-MB	BK60705 D	98	99	98	105

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	25-145%
S2 = Decachlorobiphenyl	25-179%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

9.3.1

Semivolatile Surrogate Recovery Summary

Job Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: MADEP EPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]	S3 [a]	S4 [b]
MC47231-1	DE15250.D	88	82	92	96
MC47231-2	DE15251.D	93	85	97	95
MC47231-3	DE15252.D	99	96	108	105
MC47231-4	DE15253.D	93	89	101	98
MC47231-5	DE15254.D	94	91	104	97
MC47231-6	DE15255.D	116	112	127	90
MC47231-7	DE15256.D	103	94	108	101
MC47231-8	DE15257.D	135	99	101	94
OP48394-BS	DE15246.D	92	93	94	90
OP48394-BSD	DE15247.D	81	85	84	99
OP48394-MB	DE15249.D	83	83	95	88

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 2-Fluorobiphenyl	40-140%
S3 = 2-Bromonaphthalene	40-140%
S4 = 1-Chlorooctadecane	40-140%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 Method Blanks

Login Number: MC47231
Account: ENVTRAC - Envir Tra
Pr ject: Maggi re Somerville, 343 351 Summer Street, Somerville, MA

QC Batch ID: MP.6613
Matrix Type: SOLID

Meth ds: SW846 6010C
Units: mg/kg

Prep Date: 08/10/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum		.4	1.2		
Antimony	1.	.1	.1	-0.010	<1.0
Arsenic	1.	.11		.12	<1.0
Barium	5.	.015	.076	0.010	<5.0
Beryllium	.40	.013	.015	-0.020	<0.40
Bismuth	5.0	.08	.15		
Boron	10	.12	.13		
Cadmium	0.40	.015	.031	-0.010	<0.40
Calcium	500	.93	.86		
Chromium	1.0	.028	.047	0.040	<1.0
Cobalt	5.0	.015	.031		
Copper	2.5	.15	.1		
Gold	5.0	.088	.11		
Iron	10	.1	.44		
Lead	1.0	.071	.11	-0.020	<1.0
Lithium	50	.12	.18		
Magnesium	500	1.	4		
Manganese	1.5	.004	.047		
Molybdenum	10	.019	.51		
Nickel	4.0	.018	.057	-0.020	<4.0
Palladium	5.0	.08	.14		
Platinum	5.0	.34	.54		
Potassium	500	1.8	3.4		
Selenium	1.0	.18	.3	0.060	<1.0
Silicon	10	.83	.61		
Silver	0.5	.042	.061	-0.010	<0.50
Sodium	500	.92			
Sulfur	5.0	.2	.31		
Strontium	1.0	.004	.02		
Thallium	1.0	.08	.11	0.20	<1.0
Tin	1	.064	.01		
Titanium	5.0	.036	.054		
Tungsten	20	.27	.93		

BLANK RESULTS SUMMARY
Part 2 Method Blanks

Login Number: MC47231
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26613
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 08/10/16

Metal	RL	IDL	MDL	MB raw	final
Vanadium	1.0	.026	.04	-0.020	<1.0
Zinc	2.0	.018	.17	0.25	<2.0
Zirconium	5.0	.025	.17		

Associated samples MP26613: MC47231-1, MC47231-2, MC47231-3, MC47231-4, MC47231-5, MC47231-6, MC47231-7, MC47231-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 351 Summer Street, Somerville, MA

QC Batch ID: MP 6613
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 08/10/16 08/10/16

Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	51.[illegible]	5[illegible]	103.4	80-120	51.9	50	103.8	0.4	20
Arsenic	52.[illegible]	50	104.4	80-120	52.8	50	105.6	1.1	20
Barium	204	200	102.0	80-120	199	200	99.5	2.5	20
Beryllium	50.6	50	101.2	80-120	49.9	50	99.8	1.4	20
Bismuth									
Boron									
Cadmium	51.5	[illegible]	103.0	80-120	51.9	50	103.8	0.8	20
Calcium									
Chromium	50.0	50	100.0	80-120	50.1	50	100.2	0.2	20
Cobalt									
Copper									
Gold									
Iron									
Lead	99.6	100	99.8	80-120	101	100	101.0	1.2	20
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel	50.7	5[illegible]	101.4	80-120	51.1	50	102.2	0.8	20
Palladium									
Platinum									
Potassium									
Selenium	50.8	50	101.6	80-120	51.[illegible]	50	103.4	1.8	20
Silicon									
Silver	18.6	2[illegible]	93.0	80-120	18.8	20	94.0	1.1	20
Sodium									
Sulfur									
Strontium									
Thallium	51.[illegible]	50	103.4	80-120	52.7	50	105.4	1.9	20
Tin									
Titanium									
Tungsten									

10.1.2 10

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47231
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 351 Summer Street, Somerville, MA

QC Batch ID: MP26613
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 08/10/16 08/10/16

Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
Vanadium	51.0	50	102.0	80-120	50.9	50	101.8	0.2	20
Zinc	52.1	50	104.2	80-120	52.2	50	104.4	0.2	[illegible]
Zirconium									

Associated samples MP26613: MC47231-1, MC47231-2, MC47231-3, MC47231-4, MC47231-5, MC47231-6, MC47231-7, MC47231-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

10.1.2 10

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47231
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26613
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 08/10/16

Metal	LCS Result	Spikelot MPLCS86	% Rec	QC Limits
Aluminum				
Antimony	50.3	86.5	58.2	1-199
Arsenic	94.9	97.5	97.3	78-122
Barium	292	306	95.4	83-117
Beryllium	94.8	100	94.8	83-118
Bismuth				
Boron				
Cadmium	75.9	76.6	99.1	82-118
Calcium				
Chromium	103	103	100.0	80-121
Cobalt				
Copper				
Gold				
Iron				
Lead	96.4	96.7	99.7	82-118
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	150	153	98.0	82-118
Palladium				
Platinum				
Potassium				
Selenium	159	161	98.8	78-123
Silicon				
Silver	47.8	49.3	97.0	75-125
Sodium				
Sulfur				
Strontium				
Thallium	121	119	101.7	79-121
Tin				
Titanium				
Tungsten				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47231
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26613
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 08/10/16

Metal	LCS Result	Spikelot MPLCS86	% Rec	QC Limits
Vanadium	103	102	101.0	78-123
Zinc	215	229	93.9	82-118
Zirconium				

Associated samples MP26613: MC47231-1, MC47231-2, MC47231-3, MC47231-4, MC47231-5, MC47231-6, MC47231-7, MC47231-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

10.1.2 10

Method:
Units: ug/l

Prep Date: 08/10/16

Meta	MC4 [illegible] Original	DUP	RPD	QC Limits
Antimony	ND	ND	NC	0-1
Arsenic	2.9	2.8	3.5	0-15
Beryllium	4.8	4.8	0.0	0-15
Boron	46.2	46.2	0.0	0-15
Bromide				
Cadmium	ND	ND	NC	0-1
Calcium	100.0(a)	100.0(a)	0.0	0-15
Chloride	1.9	1.9	0.0	0-15
Chromium	7.5	7.5	0.0	0-15
Cobalt	ND	ND	NC	0-1
Copper	3.9	3.9	0.0	0-15
Fluoride				
Iron	ND	ND	NC	0-1
Lead	ND	ND	NC	0-1
Magnesium	44.1	44.1	0.0	0-15
Manganese	0.6	0.6	0.0	0-15
Mercury				
Molybdenum	ND	ND	NC	0-1
Nickel	ND	ND	NC	0-1
Nitrate-N				
Nitrite-N				
Orthophosphate-P				
Potassium	1.4	1.4	0.0	0-15
Selenium	ND	ND	NC	0-1
Silica				
Silver	ND	ND	NC	0-1
Sodium	100.0(a)	100.0(a)	0.0	0-15
Sulfate	1.4	1.4	0.0	0-15
Thallium				
Tin	ND	ND	NC	0-1
Titanium				
Vanadium	ND	ND	NC	0-1
Zinc	ND	ND	NC	0-1
Zirconium				

Associated samples MP26613: MC47231 1, MC47231 2, MC47231 3, MC47231 4, MC47231 5, MC47231 6, MC47231 7, MC47231 8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 10 times IDL)

QC Batch ID: MP26613
Matrix Type: SOIL
Method:
Units: ug/l

Prep Date: 08/10/16

Meta	MC4 [illegible] Original	DUP	RPD	QC Limits
Vanadium	1.6	1.6	5.3	0-15
Zinc	4.8	456	6.5	0-15
Zirconium				

Associated samples MP26613: MC47231 1, MC47231 2, MC47231 3, MC47231 4, MC47231 5, MC47231 6, MC47231 7, MC47231 8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 10 times IDL)

POST DIGESTATE SPIKE SUMMARY

Login Number: MC47231
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26613
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/10/16

Metal	Sample ml	Final ml	MC47231-8 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	10	10.1			23	.1		19.8198	116.2	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Gold										
Iron										
Lead										
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Palladium										
Platinum										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Sulfur										
Strontium										
Thallium										
Tin										
Titanium										
Tungsten										

POST DIGESTATE SPIKE SUMMARY

Login Number: MC47231
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26613
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/10/16

Metal	Sample ml	Final ml	MC47231-8 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Vanadium										
Zinc										
Zirconium										

Associated samples MP26613: MC47231-1, MC47231-2, MC47231-3, MC47231-4, MC47231-5, MC47231-6, MC47231-7, MC47231-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

10.1.4 10

[redacted]

Prep Date: 08/10/16

Meta	[redacted]	MB raw	[redacted]
Mercury	[redacted]	[redacted]	<0.033

Associated samples MP_6614: MC4[redacted]31 1, MC4[redacted]31 3, MC4[redacted]31 4, MC4[redacted]31 5, MC4[redacted]31 6, MC4[redacted]31 7, MC4[redacted]31 8

Results < IDL are shown as zero for calculation purposes.
[*] Outside of QC limits
NAR: Analyte not requested

10.2.1 10

[redacted]

Prep Date: 08/10/16 08/10/16

Meta	BSP Result	Spiked HGRWS1	% Re	QC Limits	BSD Result	Spiked HGRWS1	% Re	RPD	QC Limit
Mercury	0.4[redacted]	0.5	92.0	[redacted]	0.4[redacted]	[redacted]	96	4.3	[redacted]

Associated samples MP_6614: MC4[redacted]31 1, MC4[redacted]31 2, MC4[redacted]31 3, MC4[redacted]31 4, MC4[redacted]31 5, MC4[redacted]31 6, MC4[redacted]31 7, MC4[redacted]31 8

Results < IDL are shown as zero for calculation purposes.
[*] Outside of QC limits
NAR: Analyte not requested

10.2.2 10

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47231
Account: ENVTRAC - EnviroTra
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26614
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 08/10/16

Metal	LCS Result	Spikelot HGLCS86	% Rec	QC Limits
Mercury	18.0	20..	89.1	71-129

Associated samples MP26614: MC47231-1, MC47231-2, MC47231-3, MC47231-4, MC47231-5, MC47231-6, MC47231-7, MC47231-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

APPENDIX D

EnviroTrac
Environmental Services

SGS ACCUTEST
New England

08/29/16

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0
Automated Report

Technical Report for

EnviroTrac

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

03.990202.00

SGS Accutest Job Number: MC47407

Sampling Date: 08/17/16

Report to:

EnviroTrac

denat@envirotrac.com

ATTN: Dena Tomassi

Total number of pages in report: 126

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable

H. (Brad) Madadian
Lab Director

Client Service contact: Robert Soll 508-481-6200

Certifications MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed

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Sample Summary

EnviroTrac

Job No: MC47407

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC47407-1	08/17/16	11 49	LMF	M08/19/16	AQ	Ground Water	MW-1
MC47407-1F	08/17/16	11 49	LMF	M08/19/16	AQ	Groundwater Filtered	MW-1
MC47407-2	08/17/16	11 50	LMF	M08/19/16	AQ	Ground Water	MW-2
MC47407-2F	08/17/16	11 50	LMF	M08/19/16	AQ	Groundwater Filtered	MW-2
MC47407-3	08/17/16	09 58	LMF	M08/19/16	AQ	Ground Water	MW-3
MC47407-3F	08/17/16	09 58	LMF	M08/19/16	AQ	Groundwater Filtered	MW-3
MC47407-4	08/17/16	10 44	LMF	M08/19/16	AQ	Ground Water	MW-103
MC47407-4F	08/17/16	10 44	LMF	M08/19/16	AQ	Groundwater Filtered	MW-103
MC47407-5	08/17/16	10 40	LMF	M08/19/16	AQ	Ground Water	MW-108
MC47407-6	08/17/16	08 54	LMF	M08/19/16	AQ	Ground Water	B-2/MW
MC47407-6F	08/17/16	08 54	LMF	M08/19/16	AQ	Groundwater Filtered	B-2/MW
MC47407-7	08/17/16	09 41	LMF	M08/19/16	AQ	Ground Water	B-3/MW
MC47407-7F	08/17/16	09 41	LMF	M08/19/16	AQ	Groundwater Filtered	B-3/MW

Sample Summary
(continued)

EnviroTrac

Job No: MC47407

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC47407-8	08/17/16	07 39	LMFM	08/19/16	AQ	Ground Water	MW-105
MC47407-8F	08/17/16	07 39	LMFM	08/19/16	AQ	Groundwater Filtered	MW-105
MC47407-9	08/17/16	07 31	LMFM	08/19/16	AQ	Ground Water	MW-106
MC47407-9F	08/17/16	07 31	LMFM	08/19/16	AQ	Groundwater Filtered	MW-106
MC47407-10	08/17/16	08 43	LMFM	08/19/16	AQ	Ground Water	MW-107
MC47407-10F	08/17/16	08 43	LMFM	08/19/16	AQ	Groundwater Filtered	MW-107

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EnviroTrac **Job No:** MC47407

Site: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA **Report Date** 8/29/2016 11 42 24 A

10 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 08/17/2016 and were received at SGS Accutest New England on 08/19/2016 properly preserved, at 4 6 Deg C and intact These Samples received a job number of MC47407 A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job For more information, please refer to QC summary pages

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** MSN3823

- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- The response factor (RF) for the 2-Butanone and Acetone low points (0 056 and 0 061) and average points (0 050 and 0 050 in the initial calibration MSN3802-ICC3802 are less than the required RF of 0 1 as noted in Table 4 of SW846 8260C
- RPD(s) for MSN3823-BSD for 1,4-Dioxane are outside MCP criteria
- MSN3823-BSD for Hexachlorobutadiene are outside MCP criteria
- Continuing calibration check standard MSN3823-CC3802 for 1,4-dioxane exceed 40% Difference (response biased high) Associated samples are non-detect for this compound
- Quadratic regression is employed for initial calibration standard MSN3802-ICC3802 for dichlorodifluoromethane

Volatiles by GC By Method MADEP VPH REV 1.1

Matrix: AQ **Batch ID:** GBH2374

- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: AQ **Batch ID:** OP48508

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- RPD(s) for OP48508-BSD for Pyrene are outside control limits Target recovery satisfactory

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26664

- All samples were digested within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- Sample(s) MC47407-1FSDL were used as the QC samples for metals
- RPD(s) for Serial Dilution for Arsenic, Barium, Nickel, Zinc are outside control limits for sample MP26664-SD1 Percent difference acceptable due to low initial sample concentration (< 50 times IDL)

Metals By Method SW846 7470A

Matrix: AQ	Batch ID: MP26670

- All samples were digested within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

SGS Accutest may not have met all requested limits due to methodology limitations, sample matrix, dilutions, or percents solids

SGS Accutest New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(MC47407)

Summary of Hits

Job Number: MC47407
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/17/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC47407-1	**MW-1**					
No hits reported in this sample						
MC47407-1F	**MW-1**					
Arsenic		29.5	4.0		ug/l	SW846 6010C
MC47407-2	**MW-2**					
C19-C36 Aliphatics		362	110		ug/l	MADEP EPH REV 1.1
MC47407-2F	**MW-2**					
Arsenic		4.4	4.0		ug/l	SW846 6010C
MC47407-3	**MW-3**					
No hits reported in this sample						
MC47407-3F	**MW-3**					
No hits reported in this sample						
MC47407-4	**MW-103**					
Acetone		14.5	10		ug/l	SW846 8260C
MC47407-4F	**MW-103**					
Arsenic		24.3	4.0		ug/l	SW846 6010C
MC47407-5	**MW-108**					
No hits reported in this sample						
MC47407-6	**B-2/MW**					
No hits reported in this sample						
MC47407-6F	**B-2/MW**					
No hits reported in this sample						

Summary of Hits

Job Number: MC47407
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/17/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC47407-7	**B-3/MW**					
No hits reported in this sample						
MC47407-7F	**B-3/MW**					
Arsenic		5.7	4.0		ug/l	SW846 6010C
MC47407-8	**MW-105**					
No hits reported in this sample						
MC47407-8F	**MW-105**					
Selenium		11.6	10		ug/l	SW846 6010C
Zinc		26.1	20		ug/l	SW846 6010C
MC47407-9	**MW-106**					
No hits reported in this sample						
MC47407-9F	**MW-106**					
Arsenic		6.0	4.0		ug/l	SW846 6010C
MC47407-10	**MW-107**					
No hits reported in this sample						
MC47407-10F	**MW-107**					
Selenium		11.3	10		ug/l	SW846 6010C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	MC47407-1	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N104280.D	1	08/25/16	MC	n/a	n/a	MSN3823
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink @11 46 29-Aug-2016

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	MC47407-1	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	MC47407-1	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-129%
2037-26-5	Toluene-D8	98%		83-114%
460-00-4	4-Bromofluorobenzene	93%		75-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	MC47407-1	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP VPH REV 1 1	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH39916 D	1	08/22/16	DF	n/a	n/a	GBH2374
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	3.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5- C8 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5- C8 Aliphatics	ND	50	ug/l	
	C9- C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	83%		70-130%
	2,3,4-Trifluorotoluene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.1

4

Client Sample ID:	MW-1		
Lab Sample ID:	MC47407-1	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP EPH REV 1 1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DI:15352.D	1	08/26/16	TA	08/22/16	OP48508	GDE856
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.5	ug/l	
208-96-8	Acenaphthylene	ND	5.5	ug/l	
120-12-7	Anthracene	ND	5.5	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.5	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.5	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.5	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.5	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.5	ug/l	
218-01-9	Chrysene	ND	5.5	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	5.5	ug/l	
206-44-0	Fluoranthene	ND	5.5	ug/l	
86-73-7	Fluorene	ND	5.5	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.5	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.5	ug/l	
91-20-3	Naphthalene	ND	5.5	ug/l	
85-01-8	Phenanthrene	ND	5.5	ug/l	
129-00-0	Pyrene	ND	5.5	ug/l	
	C11-C22 Aromatics (Unadj.)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		40-140%
321-60-8	2-Fluorobiphenyl	66%		40-140%
3386-33-2	1-Chlorooctadecane	84%		40-140%
580-13-2	2-Bromonaphthalene	65%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.2

4

Client Sample ID:	MW-1		
Lab Sample ID:	MC47407-1F	**Date Sampled:**	08/17/16
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/19/16
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Arsenic	29.5	4.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	08/23/16	08/24/16	EAL	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Thallium	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Vanadium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA19404
(2) Instrument QC Batch: MA19405
(3) Prep QC Batch: MP26664
(4) Prep QC Batch: MP26670

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	MC47407-2	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N104281 D	1	08/25/16	MC	n/a	n/a	MSN3823
Run #2							

	Purge Volume
Run #1	5 0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
71-43-2	Benzene	ND	0 50	ug/l	
108-86-1	Bromobenzene	ND	5 0	ug/l	
74-97-5	Bromochloromethane	ND	5 0	ug/l	
75-27-4	Bromodichloromethane	ND	1 0	ug/l	
75-25-2	Bromoform	ND	1 0	ug/l	
74-83-9	Bromomethane	ND	2 0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5 0	ug/l	
135-98-8	sec-Butylbenzene	ND	5 0	ug/l	
98-06-6	tert-Butylbenzene	ND	5 0	ug/l	
75-15-0	Carbon disulfide	ND	5 0	ug/l	
56-23-5	Carbon tetrachloride	ND	1 0	ug/l	
108-90-7	Chlorobenzene	ND	1 0	ug/l	
75-00-3	Chloroethane	ND	2 0	ug/l	
67-66-3	Chloroform	ND	1 0	ug/l	
74-87-3	Chloromethane	ND	2 0	ug/l	
95-49-8	o-Chlorotoluene	ND	5 0	ug/l	
106-43-4	p-Chlorotoluene	ND	5 0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2 0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5 0	ug/l	
124-48-1	Dibromochloromethane	ND	1 0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1 0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1 0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1 0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1 0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2 0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1 0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1 0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1 0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1 0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1 0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	MC47407-2	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2 0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5 0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5 0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5 0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5 0	ug/l	
100-41-4	Ethylbenzene	ND	1 0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5 0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5 0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5 0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1 0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5 0	ug/l	
74-95-3	Methylene bromide	ND	5 0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5 0	ug/l	
103-65-1	n-Propylbenzene	ND	5 0	ug/l	
100-42-5	Styrene	ND	5 0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2 0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1 0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0 50	ug/l	
127-18-4	Tetrachloroethene	ND	1 0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1 0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5 0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5 0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1 0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1 0	ug/l	
79-01-6	Trichloroethene	ND	1 0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1 0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5 0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5 0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5 0	ug/l	
75-01-4	Vinyl chloride	ND	1 0	ug/l	
	m,p-Xylene	ND	1 0	ug/l	
95-47-6	o-Xylene	ND	1 0	ug/l	
1330-20-7	Xylene (total)	ND	1 0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	MC47407-2	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.3
4

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-129%
2037-26-5	Toluene-D8	99%		83-114%
460-00-4	4-Bromofluorobenzene	92%		75-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	MC47407-2	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.3
4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH39917.D	1	08/22/16	DF	n/a	n/a	GBH2374
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	3.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5-C8 Aliphatics (Unadj.)	ND	50	ug/l	
	C9-C12 Aliphatics (Unadj.)	ND	50	ug/l	
	C9-C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5-C8 Aliphatics	ND	50	ug/l	
	C9-C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	83%		70-130%
	2,3,4-Trifluorotoluene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.3

4

Client Sample ID:	MW-2		
Lab Sample ID:	MC47407-2	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP EPH REV 1 1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15353 D	1	08/26/16	TA	08/22/16	OP48508	GDE856
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5 6	ug/l	
208-96-8	Acenaphthylene	ND	5 6	ug/l	
120-12-7	Anthracene	ND	5 6	ug/l	
56-55-3	Benzo(a)anthracene	ND	5 6	ug/l	
50-32-8	Benzo(a)pyrene	ND	5 6	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5 6	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5 6	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5 6	ug/l	
218-01-9	Chrysene	ND	5 6	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	5 6	ug/l	
206-44-0	Fluoranthene	ND	5 6	ug/l	
86-73-7	Fluorene	ND	5 6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5 6	ug/l	
91-57-6	2-Methylnaphthalene	ND	5 6	ug/l	
91-20-3	Naphthalene	ND	5 6	ug/l	
85-01-8	Phenanthrene	ND	5.6	ug/l	
129-00-0	Pyrene	ND	5 6	ug/l	
	C11-C22 Aromatics (Unadj)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	362	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		40-140%
321-60-8	2-Fluorobiphenyl	67%		40-140%
3386-33-2	1-Chlorooctadecane	78%		40-140%
580-13-2	2-Bromonaphthalene	78%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.4

4

Client Sample ID:	MW-2		
Lab Sample ID:	MC47407-2F	**Date Sampled:**	08/17/16
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/19/16
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Arsenic	4 4	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Beryllium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4.0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5.0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.20	0 20	ug/l	1	08/23/16	08/24/16	EAL	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Thallium	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Vanadium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch MA19404
(2) Instrument QC Batch MA19405
(3) Prep QC Batch MP26664
(4) Prep QC Batch MP26670

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	MC47407-3	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N104282.D	1	08/25/16	MC	n/a	n/a	MSN3823
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	MC47407-3	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	MC47407-3	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.5 4

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-129%
2037-26-5	Toluene-D8	98%		83-114%
460-00-4	4-Bromofluorobenzene	93%		75-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	MC47407-3	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP VPH REV 1 1	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.5 4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BI139918 D	1	08/22/16	DF	n/a	n/a	GBII2374
Run #2							

	Purge Volume
Run #1	5 0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1 0	ug/l	
100-41-4	Ethylbenzene	ND	2 0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1 0	ug/l	
91-20-3	Naphthalene	ND	3 0	ug/l	
108-88-3	Toluene	ND	2 0	ug/l	
	m,p-Xylene	ND	2 0	ug/l	
95-47-6	o-Xylene	ND	2 0	ug/l	
	C5- C8 Aliphatics (Unadj)	ND	50	ug/l	
	C9- C12 Aliphatics (Unadj)	ND	50	ug/l	
	C9- C10 Aromatics (Unadj)	ND	50	ug/l	
	C5- C8 Aliphatics	ND	50	ug/l	
	C9- C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	84%		70-130%
	2,3,4-Trifluorotoluene	84%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.5 4

Client Sample ID:	MW-3		
Lab Sample ID:	MC47407-3	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DF15354.D	1	08/26/16	TA	08/22/16	OP48508	GDE856
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.9	ug/l	
208-96-8	Acenaphthylene	ND	5.9	ug/l	
120-12-7	Anthracene	ND	5.9	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.9	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.9	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.9	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.9	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.9	ug/l	
218-01-9	Chrysene	ND	5.9	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	5.9	ug/l	
206-44-0	Fluoranthene	ND	5.9	ug/l	
86-73-7	Fluorene	ND	5.9	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.9	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.9	ug/l	
91-20-3	Naphthalene	ND	5.9	ug/l	
85-01-8	Phenanthrene	ND	5.9	ug/l	
129-00-0	Pyrene	ND	5.9	ug/l	
	C11-C22 Aromatics (Unadj.)	ND	120	ug/l	
	C9-C18 Aliphatics	ND	120	ug/l	
	C19-C36 Aliphatics	ND	120	ug/l	
	C11-C22 Aromatics	ND	120	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%		40-140%
321-60-8	2-Fluorobiphenyl	75%		40-140%
3386-33-2	1-Chlorooctadecane	79%		40-140%
580-13-2	2-Bromonaphthalene	88%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.6 4

Client Sample ID:	MW-3		
Lab Sample ID:	MC47407-3F	**Date Sampled:**	08/17/16
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/19/16
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Arsenic	< 4.0	4.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	08/23/16	08/24/16	EAL	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Thallium	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Vanadium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA19404
(2) Instrument QC Batch: MA19405
(3) Prep QC Batch: MP26664
(4) Prep QC Batch: MP26670

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	MC47407-4	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N104283.D	1	08/25/16	MC	n/a	n/a	MSN3823
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	14.5	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	MC47407-4	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	MC47407-4	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-129%
2037-26-5	Toluene-D8	98%		83-114%
460-00-4	4-Bromofluorobenzene	94%		75-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	MC47407-4	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH39919.D	1	08/22/16	DF	n/a	n/a	GBH2374
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	3.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5- C8 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5- C8 Aliphatics	ND	50	ug/l	
	C9- C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	83%		70-130%
	2,3,4-Trifluorotoluene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.7

4

Client Sample ID:	MW-103		
Lab Sample ID:	MC47407-4	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP EPH REV 1 1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15355 D	1	08/26/16	TA	08/22/16	OP48508	GDE856
Run #2							

	Initial Volume	Final Volume
Run #1	820 ml	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	6 1	ug/l	
208-96-8	Acenaphthylene	ND	6 1	ug/l	
120-12-7	Anthracene	ND	6 1	ug/l	
56-55-3	Benzo(a)anthracene	ND	6 1	ug/l	
50-32-8	Benzo(a)pyrene	ND	6.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	6.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	6.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	6.1	ug/l	
218-01-9	Chrysene	ND	6 1	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	6.1	ug/l	
206-44-0	Fluoranthene	ND	6 1	ug/l	
86-73-7	Fluorene	ND	6.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	6 1	ug/l	
91-57-6	2-Methylnaphthalene	ND	6.1	ug/l	
91-20-3	Naphthalene	ND	6.1	ug/l	
85-01-8	Phenanthrene	ND	6.1	ug/l	
129-00-0	Pyrene	ND	6.1	ug/l	
	C11-C22 Aromatics (Unadj)	ND	120	ug/l	
	C9-C18 Aliphatics	ND	120	ug/l	
	C19-C36 Aliphatics	ND	120	ug/l	
	C11-C22 Aromatics	ND	120	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	61%		40-140%
321-60-8	2-Fluorobiphenyl	61%		40-140%
3386-33-2	1-Chlorooctadecane	76%		40-140%
580-13-2	2-Bromonaphthalene	60%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.8

4

Client Sample ID:	MW-103		
Lab Sample ID:	MC47407-4F	**Date Sampled:**	08/17/16
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/19/16
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Arsenic	24.3	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Beryllium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5 0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.20	0 20	ug/l	1	08/23/16	08/24/16	EAL	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5 0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Thallium	< 5.0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Vanadium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch MA19404
(2) Instrument QC Batch MA19405
(3) Prep QC Batch MP26664
(4) Prep QC Batch MP26670

RL = Reporting Limit

Report of Analysis

4.9

Client Sample ID:	MW-108		
Lab Sample ID:	MC47407-5	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DF15356.D	1	08/26/16	TA	08/22/16	OP48508	GDE856
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.1	ug/l	
208-96-8	Acenaphthylene	ND	5.1	ug/l	
120-12-7	Anthracene	ND	5.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	ug/l	
218-01-9	Chrysene	ND	5.1	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	5.1	ug/l	
206-44-0	Fluoranthene	ND	5.1	ug/l	
86-73-7	Fluorene	ND	5.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	ug/l	
91-20-3	Naphthalene	ND	5.1	ug/l	
85-01-8	Phenanthrene	ND	5.1	ug/l	
129-00-0	Pyrene	ND	5.1	ug/l	
	C11-C22 Aromatics (Unadj.)	ND	100	ug/l	
	C9-C18 Aliphatics	ND	100	ug/l	
	C19-C36 Aliphatics	ND	100	ug/l	
	C11-C22 Aromatics	ND	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		40-140%
321-60-8	2-Fluorobiphenyl	68%		40-140%
3386-33-2	1-Chlorooctadecane	79%		40-140%
580-13-2	2-Bromonaphthalene	80%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.10

Client Sample ID:	B-2/MW		
Lab Sample ID:	MC47407-6	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N104284.D	1	08/25/16	MC	n/a	n/a	MSN3823
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2/MW		
Lab Sample ID:	MC47407-6	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2 0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5 0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5 0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0 50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0 50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5 0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5 0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5 0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5 0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1 0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5 0	ug/l	
74-95-3	Methylene bromide	ND	5 0	ug/l	
75-09-2	Methylene chloride	ND	2 0	ug/l	
91-20-3	Naphthalene	ND	5 0	ug/l	
103-65-1	n-Propylbenzene	ND	5 0	ug/l	
100-42-5	Styrene	ND	5 0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2 0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2 0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1 0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0 50	ug/l	
127-18-4	Tetrachloroethene	ND	1 0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1 0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5 0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5 0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1 0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1 0	ug/l	
79-01-6	Trichloroethene	ND	1 0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1 0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5 0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5 0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5 0	ug/l	
75-01-4	Vinyl chloride	ND	1 0	ug/l	
	m,p-Xylene	ND	1 0	ug/l	
95-47-6	o-Xylene	ND	1 0	ug/l	
1330-20-7	Xylene (total)	ND	1 0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2/MW		
Lab Sample ID:	MC47407-6	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-129%
2037-26-5	Toluene-D8	99%		83-114%
460-00-4	4-Bromofluorobenzene	95%		75-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.10
4

Client Sample ID:	B-2 MW		
Lab Sample ID:	MC47407-6	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP VPH REV 1 1	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BI139920 D	1	08/22/16	DI	n/a	n/a	GBI12374
Run #2							

	Purge Volume
Run #1	5 0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1 0	ug/l	
100-41-4	Ethylbenzene	ND	2 0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1 0	ug/l	
91-20-3	Naphthalene	ND	3 0	ug/l	
108-88-3	Toluene	ND	2 0	ug/l	
	m,p-Xylene	ND	2 0	ug/l	
95-47-6	o-Xylene	ND	2 0	ug/l	
	C5- C8 Aliphatics (Unadj)	ND	50	ug/l	
	C9- C12 Aliphatics (Unadj)	ND	50	ug/l	
	C9- C10 Aromatics (Unadj)	ND	50	ug/l	
	C5- C8 Aliphatics	ND	50	ug/l	
	C9- C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	83%		70-130%
	2,3,4-Trifluorotoluene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.10
4

Client Sample ID:	B-2 MW		
Lab Sample ID:	MC47407-6	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP VPH REV 1 1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15357 D	1	08/26/16	TA	08/22/16	OP48508	GDI856
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5 6	ug/l	
208-96-8	Acenaphthylene	ND	5 6	ug/l	
120-12-7	Anthracene	ND	5 6	ug/l	
56-55-3	Benzo(a)anthracene	ND	5 6	ug/l	
50-32-8	Benzo(a)pyrene	ND	5 6	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5 6	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5 6	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5 6	ug/l	
218-01-9	Chrysene	ND	5 6	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	5 6	ug/l	
206-44-0	Fluoranthene	ND	5 6	ug/l	
86-73-7	Fluorene	ND	5 6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5 6	ug/l	
91-57-6	2-Methylnaphthalene	ND	5 6	ug/l	
91-20-3	Naphthalene	ND	5 6	ug/l	
85-01-8	Phenanthrene	ND	5 6	ug/l	
129-00-0	Pyrene	ND	5 6	ug/l	
	C11-C22 Aromatics (Unadj)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%		40-140%
321-60-8	2-Fluorobiphenyl	69%		40-140%
3386-33-2	1-Chlorooctadecane	74%		40-140%
580-13-2	2-Bromonaphthalene	80%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2/MW
Lab Sample ID: MC47407-6F
Matrix: AQ - Groundwater Filtered
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/17/16
Date Received: 08/19/16
Percent Solids: n/a

4.11
4

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6 0	6 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Arsenic	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Beryllium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5 0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0 20	0 20	ug/l	1	08/23/16	08/24/16	EAL	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5.0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Thallium	< 5.0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Vanadium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch MA19404
(2) Instrument QC Batch MA19405
(3) Prep QC Batch MP26664
(4) Prep QC Batch MP26670

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-3/MW
Lab Sample ID: MC47407-7
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/17/16
Date Received: 08/19/16
Percent Solids: n/a

4.12
4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N104285 D	1	08/25/16	MC	n/a	n/a	MSN3823
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
71-43-2	Benzene	ND	0 50	ug/l	
108-86-1	Bromobenzene	ND	5 0	ug/l	
74-97-5	Bromochloromethane	ND	5 0	ug/l	
75-27-4	Bromodichloromethane	ND	1 0	ug/l	
75-25-2	Bromoform	ND	1 0	ug/l	
74-83-9	Bromomethane	ND	2 0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5 0	ug/l	
135-98-8	sec-Butylbenzene	ND	5 0	ug/l	
98-06-6	tert-Butylbenzene	ND	5 0	ug/l	
75-15-0	Carbon disulfide	ND	5 0	ug/l	
56-23-5	Carbon tetrachloride	ND	1 0	ug/l	
108-90-7	Chlorobenzene	ND	1 0	ug/l	
75-00-3	Chloroethane	ND	2 0	ug/l	
67-66-3	Chloroform	ND	1 0	ug/l	
74-87-3	Chloromethane	ND	2 0	ug/l	
95-49-8	o-Chlorotoluene	ND	5 0	ug/l	
106-43-4	p-Chlorotoluene	ND	5 0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2 0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5 0	ug/l	
124-48-1	Dibromochluromethane	ND	1 0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1 0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1 0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1 0	ug/l	
75-71-8	Dichlorodifluuromethane	ND	2 0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1 0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1 0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1 0	ug/l	
156-59-2	cis-1,2-Dichloruethene	ND	1 0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1 0	ug/l	

ND = Nut detected
RL = Repurting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence uf a compound

Report of Analysis

Client Sample ID:	B-3 MW		
Lab Sample ID:	MC47407-7	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.12 4

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@11:46 29-Aug-2016

Report of Analysis

Client Sample ID:	B-3/MW		
Lab Sample ID:	MC47407-7	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.12 4

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-129%
2037-26-5	Toluene-D8	98%		83-114%
460-00-4	4-Bromofluorobenzene	93%		75-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.12 4

Client Sample ID:	B-3/MW				
Lab Sample ID:	MC47407-7		**Date Sampled:**	08/17/16	
Matrix:	AQ - Ground Water		**Date Received:**	08/19/16	
Method:	MADEP VPH REV 1 1		**Percent Solids:**	n/a	
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH39921 D	1	08/22/16	DF	n/a	n/a	GBH2374
Run #2							

	Purge Volume
Run #1	5 0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1 0	ug/l	
100-41-4	Ethylbenzene	ND	2 0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1 0	ug/l	
91-20-3	Naphthalene	ND	3 0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5- C8 Aliphatics (Unadj)	ND	50	ug/l	
	C9- C12 Aliphatics (Unadj)	ND	50	ug/l	
	C9- C10 Aromatics (Unadj)	ND	50	ug/l	
	C5- C8 Aliphatics	ND	50	ug/l	
	C9- C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	81%		70-130%
	2,3,4-Trifluorotoluene	81%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.12 4

Client Sample ID:	B-3/MW				
Lab Sample ID:	MC47407-7		**Date Sampled:**	08/17/16	
Matrix:	AQ - Ground Water		**Date Received:**	08/19/16	
Method:	MADEP EPH REV 1 1 SW846 3510C		**Percent Solids:**	n/a	
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15358 D	1	08/26/16	TA	08/22/16	OP48508	GDE856
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	2 0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5 6	ug/l	
208-96-8	Acenaphthylene	ND	5 6	ug/l	
120-12-7	Anthracene	ND	5 6	ug/l	
56-55-3	Benzo(a)anthracene	ND	5 6	ug/l	
50-32-8	Benzo(a)pyrene	ND	5 6	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5 6	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5 6	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5 6	ug/l	
218-01-9	Chrysene	ND	5 6	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	5 6	ug/l	
206-44-0	Fluoranthene	ND	5 6	ug/l	
86-73-7	Fluorene	ND	5 6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5 6	ug/l	
91-57-6	2-Methylnaphthalene	ND	5 6	ug/l	
91-20-3	Naphthalene	ND	5 6	ug/l	
85-01-8	Phenanthrene	ND	5 6	ug/l	
129-00-0	Pyrene	ND	5 6	ug/l	
	C11-C22 Aromatics (Unadj)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		40-140%
321-60-8	2-Fluorobiphenyl	76%		40-140%
3386-33-2	1-Chlorooctadecane	76%		40-140%
580-13-2	2-Bromonaphthalene	89%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3 MW		
Lab Sample ID:	MC47407-7F	**Date Sampled:**	08/17/16
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/19/16
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6 0	6 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Arsenic	5 7	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Beryllium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5 0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0 20	0 20	ug/l	1	08/23/16	08/24/16	EAL	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5 0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Thallium	< 5 0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Vanadium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA19404
(2) Instrument QC Batch: MA19405
(3) Prep QC Batch: MP26664
(4) Prep QC Batch: MP26670

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-105		
Lab Sample ID:	MC47407-8	**Date Sampled:**	08 17 16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N104286 D	1	08/25/16	MC	n/a	n/a	MSN3823
Run #2							

	Purge Volume
Run #1	5 0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
71-43-2	Benzene	ND	0 50	ug/l	
108-86-1	Bromobenzene	ND	5 0	ug/l	
74-97-5	Bromochloromethane	ND	5 0	ug/l	
75-27-4	Bromodichloromethane	ND	1 0	ug/l	
75-25-2	Bromoform	ND	1 0	ug/l	
74-83-9	Bromomethane	ND	2 0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5 0	ug/l	
135-98-8	sec-Butylbenzene	ND	5 0	ug/l	
98-06-6	tert-Butylbenzene	ND	5 0	ug/l	
75-15-0	Carbon disulfide	ND	5 0	ug/l	
56-23-5	Carbon tetrachloride	ND	1 0	ug/l	
108-90-7	Chlorobenzene	ND	1 0	ug/l	
75-00-3	Chloroethane	ND	2 0	ug/l	
67-66-3	Chloroform	ND	1 0	ug/l	
74-87-3	Chloromethane	ND	2 0	ug/l	
95-49-8	o-Chlorotoluene	ND	5 0	ug/l	
106-43-4	p-Chlorotoluene	ND	5 0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2 0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5 0	ug/l	
124-48-1	Dibromochloromethane	ND	1 0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1 0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1 0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1 0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1 0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2 0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1 0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1 0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1 0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1 0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1 0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-105		
Lab Sample ID:	MC47407-8	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.14
4

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2 0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5 0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5 0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5 0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0 50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1 0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5 0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5 0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5 0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1 0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5 0	ug/l	
74-95-3	Methylene bromide	ND	5 0	ug/l	
75-09-2	Methylene chloride	ND	2 0	ug/l	
91-20-3	Naphthalene	ND	5 0	ug/l	
103-65-1	n-Propylbenzene	ND	5 0	ug/l	
100-42-5	Styrene	ND	5 0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2 0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2 0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1 0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1 0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5 0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5 0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1 0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1 0	ug/l	
79-01-6	Trichloroethene	ND	1 0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1 0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5 0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5 0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5 0	ug/l	
75-01-4	Vinyl chloride	ND	1 0	ug/l	
	m,p-Xylene	ND	1 0	ug/l	
95-47-6	o-Xylene	ND	1 0	ug/l	
1330-20-7	Xylene (total)	ND	1 0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-105		
Lab Sample ID:	MC47407-8	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.14
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VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-129%
2037-26-5	Toluene-D8	97%		83-114%
460-00-4	4-Bromofluorobenzene	94%		75-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.14
4

Client Sample ID:	MW-105		
Lab Sample ID:	MC47407-8	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH39922.D	1	08/22/16	DF	n/a	n/a	GBH2374
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	3.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5-C8 Aliphatics (Unadj.)	ND	50	ug/l	
	C9-C12 Aliphatics (Unadj.)	ND	50	ug/l	
	C9-C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5-C8 Aliphatics	ND	50	ug/l	
	C9-C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	81%		70-130%
	2,3,4-Trifluorotoluene	82%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink @11:46 29-Aug-2016

Report of Analysis

4.14
4

Client Sample ID:	MW-105		
Lab Sample ID:	MC47407-8	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15360.D	1	08/26/16	TA	08/22/16	OP48508	GDE856
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.6	ug/l	
208-96-8	Acenaphthylene	ND	5.6	ug/l	
120-12-7	Anthracene	ND	5.6	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.6	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.6	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.6	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.6	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.6	ug/l	
218-01-9	Chrysene	ND	5.6	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	5.6	ug/l	
206-44-0	Fluoranthene	ND	5.6	ug/l	
86-73-7	Fluorene	ND	5.6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.6	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.6	ug/l	
91-20-3	Naphthalene	ND	5.6	ug/l	
85-01-8	Phenanthrene	ND	5.6	ug/l	
129-00-0	Pyrene	ND	5.6	ug/l	
	C11-C22 Aromatics (Unadj.)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		40-140%
321-60-8	2-Fluorobiphenyl	70%		40-140%
3386-33-2	1-Chlorooctadecane	69%		40-140%
580-13-2	2-Bromonaphthalene	83%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-105
Lab Sample ID: MC47407-8F
Matrix: AQ - Groundwater Filtered
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/17/16
Date Received: 08/19/16
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6 0	6 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Arsenic	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Beryllium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5.0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0 20	0 20	ug/l	1	08/23/16	08/24/16	EAL	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Selenium	11.6	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Thallium	< 5.0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Vanadium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Zinc	26.1	20	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch MA19404
(2) Instrument QC Batch MA19405
(3) Prep QC Batch MP26664
(4) Prep QC Batch MP26670

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-106
Lab Sample ID: MC47407-9
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/17/16
Date Received: 08/19/16
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N104287 D	1	08/25/16	MC	n/a	n/a	MSN3823
Run #2							

	Purge Volume
Run #1	5 0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5 0	ug/l	
74-97-5	Bromochloromethane	ND	5 0	ug/l	
75-27-4	Bromodichloromethane	ND	1 0	ug/l	
75-25-2	Bromoform	ND	1 0	ug/l	
74-83-9	Bromomethane	ND	2 0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5 0	ug/l	
98-06-6	tert-Butylbenzene	ND	5 0	ug/l	
75-15-0	Carbon disulfide	ND	5 0	ug/l	
56-23-5	Carbon tetrachloride	ND	1 0	ug/l	
108-90-7	Chlorobenzene	ND	I 0	ug/l	
75-00-3	Chloroethane	ND	2 0	ug/l	
67-66-3	Chloroform	ND	1 0	ug/l	
74-87-3	Chloromethane	ND	2 0	ug/l	
95-49-8	o-Chlorotoluene	ND	5 0	ug/l	
106-43-4	p-Chlorotoluene	ND	5 0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2 0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5 0	ug/l	
124-48-1	Dibromochloromethane	ND	1 0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1 0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1 0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1 0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2 0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1 0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1 0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1 0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1 0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1 0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-106		
Lab Sample ID:	MC47407-9	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.16 4

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-106		
Lab Sample ID:	MC47407-9	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.16 4

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-129%
2037-26-5	Toluene-D8	97%		83-114%
460-00-4	4-Bromofluorobenzene	94%		75-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.16 4

Client Sample ID:	MW-106		
Lab Sample ID:	MC47407-9	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH39923.D	1	08/22/16	DF	n/a	n/a	GBH2374
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	3.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5-C8 Aliphatics (Unadj.)	ND	50	ug/l	
	C9-C12 Aliphatics (Unadj.)	ND	50	ug/l	
	C9-C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5-C8 Aliphatics	ND	50	ug/l	
	C9-C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	82%		70-130%
	2,3,4-Trifluorotoluene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.16 4

Client Sample ID:	MW-106		
Lab Sample ID:	MC47407-9	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15361.D	1	08/26/16	TA	08/22/16	OP48508	GDE856
Run #2							

	Initial Volume	Final Volume
Run #1	860 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.8	ug/l	
208-96-8	Acenaphthylene	ND	5.8	ug/l	
120-12-7	Anthracene	ND	5.8	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.8	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.8	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.8	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.8	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.8	ug/l	
218-01-9	Chrysene	ND	5.8	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	5.8	ug/l	
206-44-0	Fluoranthene	ND	5.8	ug/l	
86-73-7	Fluorene	ND	5.8	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.8	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.8	ug/l	
91-20-3	Naphthalene	ND	5.8	ug/l	
85-01-8	Phenanthrene	ND	5.8	ug/l	
129-00-0	Pyrene	ND	5.8	ug/l	
	C11-C22 Aromatics (Unadj.)	ND	120	ug/l	
	C9-C18 Aliphatics	ND	120	ug/l	
	C19-C36 Aliphatics	ND	120	ug/l	
	C11-C22 Aromatics	ND	120	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		40-140%
321-60-8	2-Fluorobiphenyl	70%		40-140%
3386-33-2	1-Chlorooctadecane	80%		40-140%
580-13-2	2-Bromonaphthalene	81%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-106		
Lab Sample ID:	MC47407-9F	**Date Sampled:**	08/17/16
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/19/16
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Arsenic	6.0	4.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	08/23/16	08/24/16	EAL	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Thallium	< 5.0	5.0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Vanadium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA19404
(2) Instrument QC Batch: MA19405
(3) Prep QC Batch: MP26664
(4) Prep QC Batch: MP26670

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-107		
Lab Sample ID:	MC47407-10	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N104288.D	1	08/25/16	MC	n/a	n/a	MSN3823
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-107		
Lab Sample ID:	MC47407-10	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.18 4

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5 0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5 0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5 0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0 50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0 50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5 0	ug/l	
100-41-4	Ethylbenzene	ND	1 0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5 0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5 0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5 0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1 0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5 0	ug/l	
74-95-3	Methylene bromide	ND	5 0	ug/l	
75-09-2	Methylene chloride	ND	2 0	ug/l	
91-20-3	Naphthalene	ND	5 0	ug/l	
103-65-1	n-Propylbenzene	ND	5 0	ug/l	
100-42-5	Styrene	ND	5 0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2 0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2 0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1 0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0 50	ug/l	
127-18-4	Tetrachloroethene	ND	1 0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1 0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5 0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5 0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1 0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1 0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1 0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5 0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5 0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5 0	ug/l	
75-01-4	Vinyl chloride	ND	1 0	ug/l	
	m,p-Xylene	ND	1 0	ug/l	
95-47-6	o-Xylene	ND	1 0	ug/l	
1330-20-7	Xylene (total)	ND	1 0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-107		
Lab Sample ID:	MC47407-10	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.18 4

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-129%
2037-26-5	Toluene-D8	99%		83-114%
460-00-4	4-Bromofluorobenzene	94%		75-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-107		
Lab Sample ID:	MC47407-10	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH39924.D	1	08/22/16	DF	n/a	n/a	GBH2374
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	3.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5-C8 Aliphatics (Unadj.)	ND	50	ug/l	
	C9-C12 Aliphatics (Unadj.)	ND	50	ug/l	
	C9-C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5-C8 Aliphatics	ND	50	ug/l	
	C9-C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	82%		70-130%
	2,3,4-Trifluorotoluene	82%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink @ 11:46 29-Aug-2016

Report of Analysis

Client Sample ID:	MW-107		
Lab Sample ID:	MC47407-10	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15362.D	1	08/26/16	TA	08/22/16	OP48508	GDE856
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	6.3	ug/l	
208-96-8	Acenaphthylene	ND	6.3	ug/l	
120-12-7	Anthracene	ND	6.3	ug/l	
56-55-3	Benzo(a)anthracene	ND	6.3	ug/l	
50-32-8	Benzo(a)pyrene	ND	6.3	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	6.3	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	6.3	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	6.3	ug/l	
218-01-9	Chrysene	ND	6.3	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	6.3	ug/l	
206-44-0	Fluoranthene	ND	6.3	ug/l	
86-73-7	Fluorene	ND	6.3	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	6.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	6.3	ug/l	
91-20-3	Naphthalene	ND	6.3	ug/l	
85-01-8	Phenanthrene	ND	6.3	ug/l	
129-00-0	Pyrene	ND	6.3	ug/l	
	C11-C22 Aromatics (Unadj.)	ND	130	ug/l	
	C9-C18 Aliphatics	ND	130	ug/l	
	C19-C36 Aliphatics	ND	130	ug/l	
	C11-C22 Aromatics	ND	130	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		40-140%
321-60-8	2-Fluorobiphenyl	77%		40-140%
3386-33-2	1-Chlorooctadecane	81%		40-140%
580-13-2	2-Bromonaphthalene	91%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-107		
Lab Sample ID:	MC47407-10F	**Date Sampled:**	08/17/16
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/19/16
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6 0	6 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Arsenic	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Beryllium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4 0	4 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5.0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.20	0 20	ug/l	1	08/23/16	08/24/16	EAL	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Selenium	11.3	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5.0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Thallium	< 5 0	5 0	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Vanadium	< 10	10	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	08/22/16	08/24/16	EAL	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch MA19404
(2) Instrument QC Batch MA19405
(3) Prep QC Batch MP26664
(4) Prep QC Batch MP26670

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- EPH Form
- VPH Form
- Sample Tracking Chronicle
- QC Evaluation MA MCP Limits

SGS ACCUTEST

CHAIN OF CUSTODY

PAGE 1 OF 1

SGS Accutest of New England
86 D'Angelo Drive Building One Marlborough, MA 01752
TEL 508.481.6200 FAX 508.481.7753
www.accutest.com

MC47407

Client / Reporting Information	Project Information	Requested Analyses (see TEST CODE sheet)	Matrix Codes
Company Name: EnviroTrac Ltd	Project Name: Maggiore Somerville	VOCs 8260	DW Drinking Water
Street Address: 2 Merchant St., Ste #2	Street: 351 Summer St.	VPH	GW Ground Water
City: Sharon State: MA Zip: 02067	City: Somerville, MA	EPH	WW Water
Project Contact: Craig Blake E-mail: craig@envirotrac.com	Billing Information (if different from Report to)	14 MCP Metals (dissolved + Field Filtered)	SW Surface Water
Phone #: 781-793-0074	Company Name: 03.9903C2.00		SO Soil
Sampler(s): L. Main, E. Morrissey	Street Address: Craig Blake		SL Sludge
	City State Zip		SD Sediment
	Attention: PO #		OI Oil
			LIQ Other Liquid
			AIR Air
			SOL Other Solid
			WP Wipe
			FB Field Blank
			EB Equipment Blank
			RB Rinse Blank
			TB Trip Blank

Sample #	Field ID / Point of Collection	MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCL	NaOH	HNO3	H2SO4	NONE	DI Water	LAB USE ONLY
-1F	MW-1		8/17/16	11:49	EM/KM	GW	9	8	1					
-2F	MW-2			11:50			9	8	1					
-3F	MW-3			9:58			9	8	1					
-4F	MW-103			10:44			9	8	1					
-5F	MW-108			10:40			2	A						TB
-6F	B 2/MW			8:54			9	8	1					
-7F	B-3/MW			9:41			9	8	1					
-8F	MW-105			7:39			9	8	1					
-9F	MW-106			7:31			9	8	1					MF3
-10F	MW-107			8:43			9	8	1					MF2
-11														
-12														

Turnaround Time (Business days) — Approved By (SGS Accutest PM) / Date
- Std. 10 Business Days
- Std. 2 Business Days (By Contract only) — INITIAL ASESSMENT MF
- 9 Day RUSH
- 5 Day EMERGENCY — LABEL VERIFICATION MF
- 3 Day EMERGENCY
- 2 Day EMERGENCY
- 1 Day EMERGENCY

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information
- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- FULLT3 (Level 3+4)
- CT RCP
- MA BCP
- NYASP Category A
- NYASP Category B
- State Forms
- EQD Format
- Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1 [signature]	8/17/16 7:00	1 ET secure fridge 7:00	2 [signature]	8-19-16 1430	2 [signature]
3 [signature]	8/19/16	3 [signature]	4		4
5		5			

Custody Seal # — Intact / Not Intact / Preserved where applicable

Cooler Temp: 2° 3.5 4.6 2°

5.1 5

MC47407: Chain of Custody
Page 1 of 3

SGS Accutest Sample Receipt Summary

Job Number: MC47407 Client: ENVIROTRAC Project: MAGGIORE SOMERVILLE

Date / Time Received: 8/19/2016 3 16 00 PM Delivery Method: SGS Courier Airbill #'s

Cooler Temps (Initial/Adjusted): #1 (4.6/4.6), #1 (3.5/3.5)

Cooler Security	Y or N		Y or N
1 Custody Seals Present	☐ ✓	3 COC Present	✓ ☐
2 Custody Seals Intact	☐ ✓	4 Smpl Dates/Time OK	✓ ☐

Cooler Temperature	Y or N
1 Temp criteria achieved	✓ ☐
2 Cooler temp verification	IRGUN1
3 Cooler media	Ice (Bag)
4 No Coolers	1

Quality Control Preservation	Y	N	N/A
1 Trip Blank present / cooler	☐	✓	
2 Trip Blank listed on COC	☐	✓	
3 Samples preserved properly	✓	☐	
4 VOCs headspace free	✓	☐	☐

Sample Integrity - Documentation	Y or N
1 Sample labels present on bottles	✓ ☐
2 Container labeling complete	✓ ☐
3 Sample container label COC agree	☐ ✓

Sample Integrity - Condition	Y or N
1 Sample rec'd within HT	✓ ☐
2 All containers accounted for	✓ ☐
3 Condition of sample	Intact

Sample Integrity - Instructions	Y	N	N/A
1 Analysis requested is clear	✓	☐	
2 Bottles received for unspecified tests	☐	✓	
3 Sufficient volume rec'd for analysis	✓	☐	
4 Compositing instructions clear	☐	☐	✓
5 Filtering instructions clear	☐	☐	✓

Comments

6 Received two sets of sample volume labeled "B 2/MW" one with collection time 08 54 per COC the other with 09 41
7 No volume received with ID "B 3/MW" and with a collection time of 09 41

Samples were labeled by SGS per collection time
"B 2/MW" collected 08 54 labeled as MC47407 6
"B 3/MW" collected 09 41 labeled as MC47407 7

5.1 5

MC 47407: Chain of Custody
Page 2 of 3

Sample Receipt Summary - Problem Resolution

Job Number: MC47407

CSR: Rob Soll **Response Date** 8/23/2016

Response: Client confirmed that sample "B-2/MW" collected at 08 54 should be logged as sample -6
Client confirmed that sample "B-3/MW" collected at 09 41 should be logged as sample -7
see email in file

5.1

5

MC47407: Chain of Custody
Page 3 of 3

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	WSC-CAM	Exhibit VII A
	July 1, 2010	Revision No. 1
	Final	

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name	Accutest Laboratories of New England	Project #.	MC47407
Project Location	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set list Laboratory Sample ID Numbers(s)
MC47407-1,MC47407-10,MC47407-10F,MC47407-1F,MC47407-2,MC47407-2F,MC47407-3
MC47407-3F,MC47407-4,MC47407-4F,MC47407-5,MC47407-6,MC47407-6F,MC47407-7
MC47407-7F,MC474(

Matrices Groundwater/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below)

8260 VOC (X) CAM IIA	7470/7471 Hg (X) CAM III B	MassDEP VPH (X) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH (X) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes ☑ Yes	☐ No ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No
	Responses to questions G, H, and I below is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☐ Yes	☑ No [1]
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.		
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No [1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes	☐ No [1]
	[1] ***All Negative responses must be addressed in an attached Environmental Laboratory case narrative.***		

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Position: Laboratory Director

Printed Name: H. (Bred) Madadian Date: 29-Aug-16

5.2

5

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4.6 Deg. C			
Extraction Method	SW846 3510C						

Method for Ranges	MADEP EPH REV 1.1	Client ID:	MW-1	Lab ID:	MC47407-1
Method for Targets	MADEP EPH REV 1.1	Date Collected:	8/17/2016	Date Received	8/19/2016
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	8/22/2016 10:00:00 PM	8/26/2016		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
Surrogate Standards	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	110	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	5.5	
Phenanthrene	85-01-8	ug/l	ND	5.5	
Acenaphthene	83-32-9	ug/l	ND	5.5	
Naphthalene	91-20-3	ug/l	ND	5.5	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	5.5	
Anthracene	120-12-7	ug/l	ND	5.5	
Benzo(a)anthracene	56-55-3	ug/l	ND	5.5	
Benzo(a)pyrene	50-32-8	ug/l	ND	5.5	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	5.5	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	5.5	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	5.5	
Chrysene	218-01-9	ug/l	ND	5.5	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	5.5	
Fluoranthene	206-44-0	ug/l	ND	5.5	
Fluorene	86-73-7	ug/l	ND	5.5	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	ND	5.5	
Pyrene	129-00-0	ug/l	ND	5.5	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND A	110	
C19-C36 Aliphatics		ug/l	ND A	110	
C11-C22 Aromatics		ug/l	ND C	110	

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	84	40-140 %
o-Terphenyl	%	69	40-140 %
2-Fluorobiphenyl	%	66	40-140 %
2-Bromonaphthalene	%	65	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director

Printed Name: H. (Bred) Madadien Date: 8/29/2016

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4.6 Deg. C			
Extraction Method	SW846 3510C						

Method for Ranges	MADEP EPH REV 1.1	Client ID:	MW-2	Lab ID:	MC47407-2
Method for Targets	MADEP EPH REV 1.1	Date Collected:	8/17/2016	Date Received	8/19/2016
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	8/22/2016 10:00:00 PM	8/26/2016		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
Surrogate Standards	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	110	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	5.6	
Phenanthrene	85-01-8	ug/l	ND	5.6	
Acenaphthene	83-32-9	ug/l	ND	5.6	
Naphthalene	91-20-3	ug/l	ND	5.6	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	5.6	
Anthracene	120-12-7	ug/l	ND	5.6	
Benzo(a)anthracene	56-55-3	ug/l	ND	5.6	
Benzo(a)pyrene	50-32-8	ug/l	ND	5.6	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	5.6	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	5.6	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	5.6	
Chrysene	218-01-9	ug/l	ND	5.6	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	5.6	
Fluoranthene	206-44-0	ug/l	ND	5.6	
Fluorene	86-73-7	ug/l	ND	5.6	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	ND	5.6	
Pyrene	129-00-0	ug/l	ND	5.6	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND A	110	
C19-C36 Aliphatics		ug/l	362 A	110	
C11-C22 Aromatics		ug/l	ND C	110	

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	78	40-140 %
o-Terphenyl	%	72	40-140 %
2-Fluorobiphenyl	%	67	40-140 %
2-Bromonaphthalene	%	78	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 8/29/2016

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4 6 Deg C			
Extraction Method	SW846 3510C						

Method for Ranges:	MADEP EPH REV 1 1	Client ID: MW-3		Lab ID: MC47407-3	
Method for Targets	MADEP EPH REV 1 1	Date Collected: 8/17/2016		Date Received: 8/19/2016	
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:	Last Date Run:	
	Aromatic o-Terphenyl	8/22/2016 10 00 00 PM	8/26/2016	N/A	
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	N/A	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	120	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	5 9	
Phenanthrene	85-01-8	ug/l	ND	5 9	
Acenaphthene	83-32-9	ug/l	ND	5 9	
Naphthalene	91-20-3	ug/l	ND	5 9	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	5 9	
Anthracene	120-12-7	ug/l	ND	5 9	
Benzo(a)anthracene	56-55-3	ug/l	ND	5 9	
Benzo(a)pyrene	50-32-8	ug/l	ND	5 9	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	5 9	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	5 9	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	5 9	
Chrysene	218-01-9	ug/l	ND	5 9	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	5 9	
Fluoranthene	206-44-0	ug/l	ND	5 9	
Fluorene	86-73-7	ug/l	ND	5 9	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	ND	5 9	
Pyrene	129-00-0	ug/l	ND	5 9	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND A	120	
C19-C36 Aliphatics		ug/l	ND A	120	
C11-C22 Aromatics		ug/l	ND C	120	

Surrogate Recoveries			Acceptence Range
1-Chlorooctadecane	%	79	40-140 %
o-Terphenyl	%	76	40-140 %
2-Fluorobiphenyl	%	75	40-140 %
2-Bromonaphthalene	%	88	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/29/2016

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MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4 6 Deg C			
Extraction Method	SW846 3510C						

Method for Ranges:	MADEP EPH REV 1 1	Client ID: MW-103		Lab ID: MC47407-4	
Method for Targets:	MADEP EPH REV 1 1	Date Collected: 8/17/2016		Date Received: 8/19/2016	
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:	Last Date Run:	
	Aromatic o-Terphenyl	8/22/2016 10 00 00 PM	8/26/2016	N/A	
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	N/A	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	120	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	6 1	
Phenanthrene	85-01-8	ug/l	ND	6 1	
Acenaphthene	83-32-9	ug/l	ND	6 1	
Naphthalene	91-20-3	ug/l	ND	6 1	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	6 1	
Anthracene	120-12-7	ug/l	ND	6 1	
Benzo(a)anthracene	56-55-3	ug/l	ND	6 1	
Benzo(a)pyrene	50-32-8	ug/l	ND	6 1	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	6 1	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	6 1	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	6 1	
Chrysene	218-01-9	ug/l	ND	6 1	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	6 1	
Fluoranthene	206-44-0	ug/l	ND	6 1	
Fluorene	86-73-7	ug/l	ND	6 1	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	ND	6 1	
Pyrene	129-00-0	ug/l	ND	6 1	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND A	120	
C19-C36 Aliphatics		ug/l	ND A	120	
C11-C22 Aromatics		ug/l	ND C	120	

Surrogate Recoveries			Acceptence Range
1-Chlorooctadecane	%	76	40-140 %
o-Terphenyl	%	61	40-140 %
2-Fluorobiphenyl	%	61	40-140 %
2-Bromonaphthalene	%	60	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/29/2016

5.3 5

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4.6 Deg. C			
Extraction Method	SW846 3510C						

Method for Ranges	MADEP EPH REV 1.1	Client ID:	MW-108	Lab ID:	MC47407-5
Method for Targets	MADEP EPH REV 1.1	Date Collected:	8/17/2016	Date Received	8/19/2016
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted	First Date Run.		Last Date Run.
	Aromatic o-Terphenyl	8/22/2016 10:00:00 PM	8/26/2016		N/A
EPH Fractionation Surrogate Standards	2-Fluorobiphenyl	% Solids	Low Dilution.		High Dilution:
	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	100	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	5.1	
Phenanthrene	85-01-8	ug/l	ND	5.1	
Acenaphthene	83-32-9	ug/l	ND	5.1	
Naphthalene	91-20-3	ug/l	ND	5.1	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	5.1	
Anthracene	120-12-7	ug/l	ND	5.1	
Benzo(e)anthracene	56-55-3	ug/l	ND	5.1	
Benzo(a)pyrene	50-32-8	ug/l	ND	5.1	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	5.1	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	5.1	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	5.1	
Chrysene	218-01-9	ug/l	ND	5.1	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	5.1	
Fluoranthene	206-44-0	ug/l	ND	5.1	
Fluorene	86-73-7	ug/l	ND	5.1	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	ND	5.1	
Pyrene	129-00-0	ug/l	ND	5.1	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND A	100	
C19-C36 Aliphatics		ug/l	ND A	100	
C11-C22 Aromatics		ug/l	ND C	100	
Surrogate Recoveries				**Acceptance Range**	
1-Chlorooctadecane		%	79	40-140 %	
o-Terphenyl		%	70	40-140 %	
2-Fluorobiphenyl		%	68	40-140 %	
2-Bromonaphthalene		%	80	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 8/29/2016

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4.8 Deg. C			
Extraction Method	SW846 3510C						

Method for Ranges	MADEP EPH REV 1.1	Client ID:	B-2/MW	Lab ID:	MC47407-6
Method for Targets	MADEP EPH REV 1.1	Date Collected:	8/17/2016	Date Received	8/19/2016
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run		Last Date Run
	Aromatic o-Terphenyl	8/22/2016 10:00:00 PM	8/26/2016		N/A
EPH Fractionation Surrogate Standards	2-Fluorobiphenyl	% Solids	Low Dilution.		High Dilution:
	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	110	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	5.6	
Phenanthrene	85-01-8	ug/l	ND	5.6	
Acenaphthene	83-32-9	ug/l	ND	5.6	
Naphthalene	91-20-3	ug/l	ND	5.6	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	5.6	
Anthracene	120-12-7	ug/l	ND	5.6	
Benzo(a)anthracene	56-55-3	ug/l	ND	5.8	
Benzo(a)pyrene	50-32-8	ug/l	ND	5.6	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	5.6	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	5.6	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	5.6	
Chrysene	218-01-9	ug/l	ND	5.6	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	5.6	
Fluoranthene	206-44-0	ug/l	ND	5.6	
Fluorene	86-73-7	ug/l	ND	5.6	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	ND	5.6	
Pyrene	129-00-0	ug/l	ND	5.6	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND A	110	
C19-C36 Aliphatics		ug/l	ND A	110	
C11-C22 Aromatics		ug/l	ND C	110	
Surrogate Recoveries				**Acceptance Range**	
1-Chlorooctadecane		%	74	40-140 %	
o-Terphenyl		%	76	40-140 %	
2-Fluorobiphenyl		%	69	40-140 %	
2-Bromonaphthalene		%	80	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 8/29/2016

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4 6 Deg C			
Extraction Method	SW846 3510C						

Method for Ranges:	MADEP EPH REV 1 1	Client ID:	B-3/MW	Lab ID:	MC47407-7
Method for Targets:	MADEP EPH REV 1 1	Date Collected:	8/17/2016	Date Received:	8/19/2016
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	8/22/2016 10 00 00 PM	8/26/2016		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	110	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	5.6	
Phenanthrene	85-01-8	ug/l	ND	5.6	
Acenaphthene	83-32-9	ug/l	ND	5.6	
Naphthalene	91-20-3	ug/l	ND	5.6	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	5.6	
Anthracene	120-12-7	ug/l	ND	5.6	
Benzo(a)anthracene	56-55-3	ug/l	ND	5.6	
Benzo(a)pyrene	50-32-8	ug/l	ND	5.6	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	5.6	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	5.6	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	5.6	
Chrysene	218-01-9	ug/l	ND	5.6	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	5.6	
Fluoranthene	206-44-0	ug/l	ND	5.6	
Fluorene	86-73-7	ug/l	ND	5.6	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	ND	5.6	
Pyrene	129-00-0	ug/l	ND	5.6	

Adjusted Ranges			
C9-C18 Aliphatics	ug/l	ND A	110
C19-C36 Aliphatics	ug/l	ND A	110
C11-C22 Aromatics	ug/l	ND C	110

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	76	40-140 %
o-Terphenyl	%	77	40-140 %
2-Fluorobiphenyl	%	76	40-140 %
2-Bromonaphthalene	%	89	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadien Date 8/29/2016

5.3

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MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4 6 Deg C			
Extraction Method	SW846 3510C						

Method for Ranges:	MADEP EPH REV 1 1	Client ID:	MW-105	Lab ID:	MC47407-8
Method for Targets:	MADEP EPH REV 1 1	Date Collected:	8/17/2016	Date Received:	8/19/2016
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	8/22/2016 10 00 00 PM	8/26/2016		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	110	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	5.6	
Phenanthrene	85-01-8	ug/l	ND	5.6	
Acenaphthene	83-32-9	ug/l	ND	5.6	
Naphthalene	91-20-3	ug/l	ND	5.6	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	5.6	
Anthracene	120-12-7	ug/l	ND	5.6	
Benzo(a)anthracene	56-55-3	ug/l	ND	5.6	
Benzo(a)pyrene	50-32-8	ug/l	ND	5.6	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	5.6	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	5.6	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	5.6	
Chrysene	218-01-9	ug/l	ND	5.6	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	5.6	
Fluoranthene	206-44-0	ug/l	ND	5.6	
Fluorene	86-73-7	ug/l	ND	5.6	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	ND	5.6	
Pyrene	129-00-0	ug/l	ND	5.6	

Adjusted Ranges			
C9-C18 Aliphatics	ug/l	ND A	110
C19-C36 Aliphatics	ug/l	ND A	110
C11-C22 Aromatics	ug/l	ND C	110

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	69	40-140 %
o-Terphenyl	%	72	40-140 %
2-Fluorobiphenyl	%	70	40-140 %
2-Bromonaphthalene	%	83	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/29/2016

5.3

5

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4 6 Deg C			
Extraction Method	SW846 3510C						

Method for Ranges	MADEP EPH REV 1 1	Client ID: MW-106		Lab ID: MC47407-9	
Method for Targets	MADEP EPH REV 1 1	Date Collected: 8/17/2016		Date Received: 8/19/2016	
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted	First Date Run:	Last Date Run:	
	Aromatic o-Terphenyl	8/22/2016 10 00 00 PM	8/26/2016	N/A	
EPH Fractionation Surrogate Standards	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	N/A	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	120	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	5 8	
Phenanthrene	85-01-8	ug/l	ND	5 8	
Acenaphthene	83-32-9	ug/l	ND	5 8	
Naphthalene	91-20-3	ug/l	ND	5 8	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	5 8	
Anthracene	120-12-7	ug/l	ND	5 8	
Benzo(a)anthracene	56-55-3	ug/l	ND	5 8	
Benzo(a)pyrene	50-32-8	ug/l	ND	5 8	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	5 8	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	5 8	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	5 8	
Chrysene	218-01-9	ug/l	ND	5 8	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	5 8	
Fluoranthene	206-44-0	ug/l	ND	5 8	
Fluorene	86-73-7	ug/l	ND	5 8	
Indeno(1,2,3-cd)pyrene	193-39 5	ug/l	ND	5 8	
Pyrene	129-00-0	ug/l	ND	5 8	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND A	120	
C19-C36 Aliphatics		ug/l	ND A	120	
C11-C22 Aromatics		ug/l	ND C	120	
Surrogate Recoveries				**Acceptance Range**	
1-Chlorooctadecane		%	80	40-140 %	
o-Terphenyl		%	70	40-140 %	
2-Fluorobiphenyl		%	70	40-140 %	
2-Bromonaphthalene		%	81	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature [signature] Position Laboratory Director

Printed Name H. (Brad) Madadien Date 8/29/2016

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4 6 Deg C			
Extraction Method	SW848 3510C						

Method for Ranges	MADEP EPH REV 1 1	Client ID: MW 107		Lab ID: MC47407 10	
Method for Targets	MADEP EPH REV 1 1	Date Collected: 8/17/2016		Date Received: 8/19/2016	
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted	First Date Run	Last Date Run	
	Aromatic o-Terphenyl	8/22/2016 10 00 00 PM	8/26/2016	N/A	
EPH Fractionation Surrogate Standards	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution	
	2-Bromonaphthalene	N/A	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	130	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/l	ND	6 3	
Phenanthrene	85-01-8	ug/l	ND	6 3	
Acenaphthene	83-32-9	ug/l	ND	6 3	
Naphthalene	91-20-3	ug/l	ND	6 3	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/l	ND	6 3	
Anthracene	120-12-7	ug/l	ND	6 3	
Benzo(a)anthracene	56-55-3	ug/l	ND	6 3	
Benzo(a)pyrene	50-32-8	ug/l	ND	6 3	
Benzo(b)fluoranthene	205-99-2	ug/l	ND	6 3	
Benzo(g,h,i)perylene	191-24-2	ug/l	ND	6 3	
Benzo(k)fluoranthene	207-08-9	ug/l	ND	6 3	
Chrysene	218-01-9	ug/l	ND	6 3	
Dibenz(a,h)anthracene	53-70-3	ug/l	ND	6 3	
Fluoranthene	206-44-0	ug/l	ND	6 3	
Fluorene	86-73-7	ug/l	ND	6 3	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	ND	6 3	
Pyrene	129-00-0	ug/l	ND	6 3	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND A	130	
C19-C36 Aliphatics		ug/l	ND A	130	
C11-C22 Aromatics		ug/l	ND C	130	
Surrogate Recoveries				**Acceptance Range**	
1-Chlorooctadecane		%	81	40-140 %	
o-Terphenyl		%	80	40-140 %	
2-Fluorobiphenyl		%	77	40-140 %	
2-Bromonaphthalene		%	91	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature [signature] Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/29/2016

MADEP VPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐		
Containers	Satisfactory ☑	Broken ☐	Leaking ☐			
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐			
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4.6 Deg. C		
Methanol	N/A					

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID
FID

Client ID: MW-1 | Lab ID: MC47407-1
Date Collected: 8/17/2016 | Date Received: 8/19/2016
Date Extracted: N/A | First Date Run: 8/22/2016 | Last Date Run: N/A
% Solids: N/A | Low Dilution: 1 | High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	1	
Benzene	71-43-2	C5-C8	ug/l	ND	1	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND D	50	

Surrogate Recoveries		Result	Acceptance Range
FID 2,3,4-Trifluorotoluene	%	83	70-130 %
PID 2,3,4-Trifluorotoluene	%	83	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature: [signature] Position: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/29/2016

MADEP VPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐		
Containers	Satisfactory ☑	Broken ☐	Leaking ☐			
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐			
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4.6 Deg. C		
Methanol	N/A					

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID
FID

Client ID: MW-2 | Lab ID: MC47407-2
Date Collected: 8/17/2016 | Date Received: 8/19/2016
Date Extracted: N/A | First Date Run: 8/22/2016 | Last Date Run: N/A
% Solids: N/A | Low Dilution: 1 | High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	1	
Benzene	71-43-2	C5-C8	ug/l	ND	1	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND D	50	

Surrogate Recoveries		Result	Acceptance Range
FID 2,3,4-Trifluorotoluene	%	83	70-130 %
PID 2,3,4-Trifluorotoluene	%	83	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature: [signature] Position: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/29/2016

MADEP VPH FORM

Matrix	Aqueous ✓	Soil	Sediment	Other		
Containers	Satisfactory ✓	Broken	Leaking			
Aqueous Preservatives	N/A	pH <= 2 ✓	pH > 2			
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 4 6 Deg. C		
Methanol	N/A					

Method for Ranges: MADEP VPH REV 1 1
Method for Target Analytes: MADEP VPH REV 1 1
VPH Surrogate Standards:
PID
FID

Client ID: MW-3 | Lab ID: MC47407-3
Date Collected: 8/17/2016 | Date Received: 8/19/2016

Date Extracted:	First Date Run:	Last Date Run:
N/A	8/22/2016	N/A
% Solids:	Low Dilution:	High Dilution:
N/A	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	1	
Benzene	71-43-2	C5-C8	ug/l	ND	1	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND D	50	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	84	70-130 %
PID 2,3,4-Trifluorotoluene	%	84	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A "J" qualifier indicates an estimated value.

Were all QA/QC procedures REQUIRED by the VPH Method followed? ✓ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ✓ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ✓ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/29/2016

MADEP VPH FORM

Matrix	Aqueous ✓	Soil	Sediment	Other		
Containers	Satisfactory ✓	Broken	Leaking			
Aqueous Preservatives	N/A	pH <= 2 ✓	pH > 2			
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 4 6 Deg. C		
Methanol	N/A					

Method for Ranges: MADEP VPH REV 1 1
Method for Target Analytes: MADEP VPH REV 1 1
VPH Surrogate Standards:
PID
FID

Client ID: MW-103 | Lab ID: MC47407-4
Date Collected: 8/17/2016 | Date Received: 8/19/2016

Date Extracted:	First Date Run:	Last Date Run:
N/A	8/22/2016	N/A
% Solids:	Low Dilution:	High Dilution:
N/A	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	1	
Benzene	71-43-2	C5-C8	ug/l	ND	1	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND D	50	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	83	70-130 %
PID 2,3,4-Trifluorotoluene	%	83	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A "J" qualifier indicates an estimated value.

Were all QA/QC procedures REQUIRED by the VPH Method followed? ✓ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ✓ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ✓ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/29/2016

MADEP VPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4 6 Deg C			
Methanol	N/A						

Method for Ranges: MADEP VPH REV 1 1
Method for Target Analytes: MADEP VPH REV 1 1
VPH Surrogate Standards
PID
FID

Client ID: B-2/MW
Date Collected: 8/17/2016
Lab ID: MC47407-6
Date Received: 8/19/2016
Date Extracted: N/A
First Date Run: 8/22/2016
Last Date Run: N/A
% Solids: N/A
Low Dilution: 1
High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	1	
Benzene	71-43-2	C5-C8	ug/l	ND	1	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND D	50	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	83	70-130 %
PID 2,3,4-Trifluorotoluene	%	83	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
a Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performence/accaptence standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature [signature] Postition Laboratory Director
Printed Name H. (Brad) Madadian Date 8/29/2016

5.4 5

MADEP VPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4 6 Deg C			
Methanol	N/A						

Method for Ranges: MADEP VPH REV 1 1
Method for Target Analytes: MADEP VPH REV 1 1
VPH Surrogate Standards
PID
FID

Client ID: B-3/MW
Date Collected: 8/17/2016
Lab ID: MC47407-7
Date Received: 8/19/2016
Date Extracted: N/A
First Date Run: 8/22/2016
Last Date Run: N/A
% Solids: N/A
Low Dilution: 1
High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	1	
Benzene	71-43-2	C5-C8	ug/l	ND	1	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND D	50	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	81	70-130 %
PID 2,3,4-Trifluorotoluene	%	81	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
a Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performence/accaptence standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature [signature] Postition Laboratory Director
Printed Name H. (Brad) Madadian Date 8/29/2016

5.4 5

MADEP VPH FORM

Matrix	Aqueous ✓	Soil	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A	pH <= 2 ✓	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 4.6 Deg. C	
Methanol	N/A				

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards:
PID
FID

Client ID: MW-105 Lab ID: MC47407-8
Date Collected: 8/17/2016 Date Received: 8/19/2016

Date Extracted:	First Date Run:	Last Date Run:
N/A	8/22/2016	N/A
% Solids:	Low Dilution:	High Dilution:
N/A	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	1	
Benzene	71-43-2	C5-C8	ug/l	ND	1	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND D	50	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	82	70-130 %
PID 2,3,4-Trifluorotoluene	%	81	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A 'J' qualifier indicates an estimated value.

Were all QA/QC procedures REQUIRED by the VPH Method followed? ✓ Yes ☐ No- Details Attached
Were all performance/acceptance standards for required QA/QC procedures achieved? ✓ Yes ☐ No- Details Attached
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ✓ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/29/2016

MADEP VPH FORM

Matrix	Aqueous ✓	Soil	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A	pH <= 2 ✓	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 4.6 Deg. C	
Methanol	N/A				

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards:
PID
FID

Client ID: MW-106 Lab ID: MC47407-9
Date Collected: 8/17/2016 Date Received: 8/19/2016

Date Extracted:	First Date Run:	Last Date Run:
N/A	8/22/2016	N/A
% Solids:	Low Dilution:	High Dilution:
N/A	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	1	
Benzene	71-43-2	C5-C8	ug/l	ND	1	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND D	50	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	83	70-130 %
PID 2,3,4-Trifluorotoluene	%	82	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A 'J' qualifier indicates an estimated value.

Were all QA/QC procedures REQUIRED by the VPH Method followed? ✓ Yes ☐ No- Details Attached
Were all performance/acceptance standards for required QA/QC procedures achieved? ✓ Yes ☐ No- Details Attached
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ✓ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/29/2016

MADEP VPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 4.6 Deg. C			
Methanol	N/A						

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID
FID

Client ID: MW-107 Lab ID: MC47407-10
Date Collected: 8/17/2016 Date Received: 8/19/2016

Data Extracted:	First Data Run:	Last Date Run:
N/A	8/22/2016	N/A
% Solids:	**Low Dilution:**	**High Dilution:**
N/A	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	1	
Benzene	71-43-2	C5-C8	ug/l	ND	1	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND D	50	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	82	70-130 %
PID 2,3,4-Trifluorotoluene	%	82	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/29/2016

Internal Sample Tracking Chronicle

EnviroTrac

Job No: MC47407

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC47407-1	Collected: 17-AUG-16 11:49 By: LMFM Received 19-AUG-16 By: NT					
MW-1						
MC47407-1	MADEP VPH REV 1.1	22-AUG-16 16:00	DF			VMAVPH
MC47407-1	SW846 8260C	25-AUG-16 13:44	MC			V8260MCP
MC47407-1	MADEP EPH REV 1.1	26-AUG-16 17:51	TA	22-AUG-16	AJ	BMAEPH
MC47407-2	Collected: 17-AUG-16 11:50 By: LMFM Received 19-AUG-16 By: NT					
MW-2						
MC47407-2	MADEP VPH REV 1.1	22-AUG-16 16:34	DF			VMAVPH
MC47407-2	SW846 8260C	25-AUG-16 14:13	MC			V8260MCP
MC47407-2	MADEP EPH REV 1.1	26-AUG-16 18:21	TA	22-AUG-16	AJ	BMAEPH
MC47407-3	Collected: 17-AUG-16 09:58 By: LMFM Received 19-AUG-16 By: NT					
MW-3						
MC47407-3	MADEP VPH REV 1.1	22-AUG-16 17:09	DF			VMAVPH
MC47407-3	SW846 8260C	25-AUG-16 14:42	MC			V8260MCP
MC47407-3	MADEP EPH REV 1.1	26-AUG-16 18:50	TA	22-AUG-16	AJ	BMAEPH
MC47407-4	Collected: 17-AUG-16 10:44 By: LMFM Received 19-AUG-16 By: NT					
MW-103						
MC47407-4	MADEP VPH REV 1.1	22-AUG-16 17:43	DF			VMAVPH
MC47407-4	SW846 8260C	25-AUG-16 15:10	MC			V8260MCP
MC47407-4	MADEP EPH REV 1.1	26-AUG-16 19:19	TA	22-AUG-16	AJ	BMAEPH
MC47407-5	Collected: 17-AUG-16 10:40 By: LMFM Received 19-AUG-16 By: NT					
MW-108						
MC47407-5	MADEP EPH REV 1.1	26-AUG-16 19:48	TA	22-AUG-16	AJ	BMAEPH
MC47407-6	Collected: 17-AUG-16 08:54 By: LMFM Received 19-AUG-16 By: NT					
B-2/MW						
MC47407-6	MADEP VPH REV 1.1	22-AUG-16 18:17	DF			VMAVPH
MC47407-6	SW846 8260C	25-AUG-16 15:39	MC			V8260MCP
MC47407-6	MADEP EPH REV 1.1	26-AUG-16 20:17	TA	22-AUG-16	AJ	BMAEPH

Internal Sample Tracking Chronicle

EnviroTrac

Job No: MC47407

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No 03 990202 00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC47407-7	Collected 17-AUG-16 09 41 By LMFM Received 19-AUG-16 By NT B-3/MW					
MC47407-7	MADEP VPH REV 1 1	22-AUG-16 18 52	DF			VMAVPH
MC47407-7	SW846 8260C	25-AUG-16 16 07	MC			V8260MCP
MC47407-7	MADEP EPH REV 1 1	26-AUG-16 20 46	TA	22-AUG-16	AJ	BMAEPH
MC47407-8	Collected 17-AUG-16 07 39 By LMFM Received 19-AUG-16 By NT MW-105					
MC47407-8	MADEP VPH REV 1 1	22-AUG-16 19 26	DF			VMAVPH
MC47407-8	SW846 8260C	25-AUG-16 16 35	MC			V8260MCP
MC47407-8	MADEP EPH REV 1 1	26-AUG-16 21 44	TA	22-AUG-16	AJ	BMAEPH
MC47407-9	Collected 17-AUG-16 07 31 By LMFM Received 19-AUG-16 By NT MW-106					
MC47407-9	MADEP VPH REV 1 1	22-AUG-16 20 00	DF			VMAVPH
MC47407-9	SW846 8260C	25-AUG-16 17 04	MC			V8260MCP
MC47407-9	MADEP EPH REV 1 1	26-AUG-16 22 13	TA	22-AUG-16	AJ	BMAEPH
MC47407-10	Collected 17-AUG-16 08 43 By LMFM Received 19-AUG-16 By NT MW-107					
MC47407-10	MADEP VPH REV 1 1	22-AUG-16 20 34	DF			VMAVPH
MC47407-10	SW846 8260C	25-AUG-16 17 33	MC			V8260MCP
MC47407-10	MADEP EPH REV 1 1	26-AUG-16 22 42	TA	22-AUG-16	AJ	BMAEPH
MC47407-11	Collected 17-AUG-16 11 49 By LMFM Received 19-AUG-16 By NT MW-1					
MC47407-11	SW846 6010C	24-AUG-16 14 05	EAL	22-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47407-11	SW846 7470A	24-AUG-16 15 11	EAL	23-AUG-16	EM	HG
MC47407-2	Collected 17-AUG-16 11 50 By LMFM Received 19-AUG-16 By NT MW-2					
MC47407-2	SW846 7470A	24-AUG-16 14 43	EAL	23-AUG-16	EM	HG

SGS Accutest

Internal Sample Tracking Chronicle

EnviroTrac

Job No: MC47407

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No. 03 990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC47407-2	SW846 6010C	24-AUG-16 15 15	EAL	22-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47407-3	Collected 17-AUG-16 09 58 By LMFM Received 19-AUG-16 By NT MW-3					
MC47407-3	SW846 7470A	24-AUG-16 15 14	EAL	23-AUG-16	EM	HG
MC47407-3	SW846 6010C	24-AUG-16 15 20	EAL	22-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47407-4	Collected 17-AUG-16 10 44 By LMFM Received 19-AUG-16 By NT MW-103					
MC47407-4	SW846 7470A	24-AUG-16 15 16	EAL	23-AUG-16	EM	HG
MC47407-4	SW846 6010C	24-AUG-16 15 25	EAL	22-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47407-6	Collected 17-AUG-16 08 54 By LMFM Received 19-AUG-16 By NT B-2/MW					
MC47407-6	SW846 7470A	24-AUG-16 15 18	EAL	23-AUG-16	EM	HG
MC47407-6	SW846 6010C	24-AUG-16 15 40	EAL	22-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47407-7	Collected 17-AUG-16 09 41 By LMFM Received 19-AUG-16 By NT B-3/MW					
MC47407-7	SW846 7470A	24-AUG-16 15 20	EAL	23-AUG-16	EM	HG
MC47407-7	SW846 6010C	24-AUG-16 15 45	EAL	22-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC47407-8	Collected 17-AUG-16 07 39 By LMFM Received 19-AUG-16 By NT MW-105					
MC47407-8	SW846 7470A	24-AUG-16 15 23	EAL	23-AUG-16	EM	HG
MC47407-8	SW846 6010C	24-AUG-16 15 50	EAL	22-AUG-16	EM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN

Internal Sample Tracking Chronicle

EnviroTrac

Job No: MC47407

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC47407-9	Collected 17-AUG-16 07 31 By LMFM Received 19-AUG-16 By: NT					
MW-106						
MC47407-9	SW846 7470A	24-AUG-16 15 25	EAL	23-AUG-16	EM	HG
MC47407-9	SW846 6010C	24-AUG-16 15 55	EAL	22-AUG-16	EM	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC47407-10	Collected 17-AUG-16 08 43 By: LMFM Received 19-AUG-16 By: NT					
MW-107						
MC47407-10	SW846 7470A	24-AUG-16 15 32	EAL	23-AUG-16	EM	HG
MC47407-10	SW846 6010C	24-AUG-16 16 09	EAL	22-AUG-16	EM	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN

QC Evaluation: MA MCP Limits

Job Number: MC47407
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/17/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSN3823	SW846 8260C						
MSN3823-BS	67-64-1	Acetone	BSP	REC	110	%	70-130
MSN3823-BS	71-43-2	Benzene	BSP	REC	102	%	70-130
MSN3823-BS	108-86-1	Bromobenzene	BSP	REC	108	%	70-130
MSN3823-BS	74-97-5	Bromochloromethane	BSP	REC	102	%	70-130
MSN3823-BS	75-27-4	Bromodichloromethane	BSP	REC	109	%	70-130
MSN3823-BS	75-25-2	Bromoform	BSP	REC	106	%	70-130
MSN3823-BS	74-83-9	Bromomethane	BSP	REC	106	%	70-130
MSN3823-BS	78-93-3	2-Butanone (MEK)	BSP	REC	105	%	70-130
MSN3823-BS	104-51-8	n-Butylbenzene	BSP	REC	117	%	70-130
MSN3823-BS	135-98-8	sec-Butylbenzene	BSP	REC	113	%	70-130
MSN3823-BS	98-06-6	tert-Butylbenzene	BSP	REC	111	%	70-130
MSN3823-BS	75-15-0	Carbon disulfide	BSP	REC	76	%	70-130
MSN3823-BS	56-23-5	Carbon tetrachloride	BSP	REC	110	%	70-130
MSN3823-BS	108-90-7	Chlorobenzene	BSP	REC	110	%	70-130
MSN3823-BS	75-00-3	Chloroethane	BSP	REC	94	%	70-130
MSN3823-BS	67-66-3	Chloroform	BSP	REC	102	%	70-130
MSN3823-BS	74-87-3	Chloromethane	BSP	REC	107	%	70-130
MSN3823-BS	95-49-8	o-Chlorotoluene	BSP	REC	103	%	70-130
MSN3823-BS	106-43-4	p-Chlorotoluene	BSP	REC	107	%	70-130
MSN3823-BS	108-20-3	Di-Isopropyl ether	BSP	REC	96	%	70-130
MSN3823-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	109	%	70-130
MSN3823-BS	124-48-1	Dibromochloromethane	BSP	REC	120	%	70-130
MSN3823-BS	106-93-4	1,2-Dibromoethane	BSP	REC	116	%	70-130
MSN3823-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	113	%	70-130
MSN3823-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	110	%	70-130
MSN3823-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	111	%	70-130
MSN3823-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	108	%	70-130
MSN3823-BS	75-34-3	1,1-Dichloroethane	BSP	REC	93	%	70-130
MSN3823-BS	107-06-2	1,2-Dichloroethane	BSP	REC	99	%	70-130
MSN3823-BS	75-35-4	1,1-Dichloroethene	BSP	REC	90	%	70-130
MSN3823-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	105	%	70-130
MSN3823-BS	156-60-5	trans-I,2-Dichloroethene	BSP	REC	88	%	70-130
MSN3823-BS	78-87-5	1,2-Dichloropropane	BSP	REC	101	%	70-130
MSN3823-BS	142-28-9	1,3-Dichloropropane	BSP	REC	114	%	70-130
MSN3823-BS	594-20-7	2,2-Dichloropropane	BSP	REC	105	%	70-130
MSN3823-BS	563-58-6	1,I-Dichloropropene	BSP	REC	107	%	70-130
MSN3823-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	106	%	70-130
MSN3823-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	101	%	70-130
MSN3823-BS	123-91-1	1,4-Dioxane	BSP	REC	127	%	70-130
MSN3823-BS	60-29-7	Ethyl Ether	BSP	REC	88	%	70-130
MSN3823-BS	100-41-4	Ethylbenzene	BSP	REC	112	%	70-130
MSN3823-BS	87-68-3	Hexachlorobutadiene	BSP	REC	126	%	70-130

* Sample used for QC is not from job MC47407

QC Evaluation: MA MCP Limits

Job Number: MC47407
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/17/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSN3823-BS	591-78-6	2-Hexanone	BSP	REC	126	%	70-130
MSN3823-BS	98-82-8	Isopropylbenzene	BSP	REC	106	%	70-130
MSN3823-BS	99-87-6	p-Isopropyltoluene	BSP	REC	116	%	70-130
MSN3823-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	102	%	70-130
MSN3823-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	113	%	70-130
MSN3823-BS	74-95-3	Methylene bromide	BSP	REC	105	%	70-130
MSN3823-BS	75-09-2	Methylene chloride	BSP	REC	89	%	70-130
MSN3823-BS	91-20-3	Naphthalene	BSP	REC	112	%	70-130
MSN3823-BS	103-65-1	n-Propylbenzene	BSP	REC	106	%	70-130
MSN3823-BS	100-42-5	Styrene	BSP	REC	118	%	70-130
MSN3823-BS	994-05-8	tert-Amyl Methyl Ether	BSP	REC	104	%	70-130
MSN3823-BS	637-92-3	tert-Butyl Ethyl Ether	BSP	REC	99	%	70-130
MSN3823-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	119	%	70-130
MSN3823-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	109	%	70-130
MSN3823-BS	127-18-4	Tetrachloroethene	BSP	REC	114	%	70-130
MSN3823-BS	109-99-9	Tetrahydrofuran	BSP	REC	87	%	70-130
MSN3823-BS	108-88-3	Toluene	BSP	REC	108	%	70-130
MSN3823-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	121	%	70-130
MSN3823-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	114	%	70-130
MSN3823-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	106	%	70-130
MSN3823-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	111	%	70-130
MSN3823-BS	79-01-6	Trichloroethene	BSP	REC	104	%	70-130
MSN3823-BS	75-69-4	Trichlorofluoromethane	BSP	REC	101	%	70-130
MSN3823-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	108	%	70-130
MSN3823-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	107	%	70-130
MSN3823-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	108	%	70-130
MSN3823-BS	75-01-4	Vinyl chloride	BSP	REC	93	%	70-130
MSN3823-BS		m,p-Xylene	BSP	REC	114	%	70-130
MSN3823-BS	95-47-6	o-Xylene	BSP	REC	115	%	70-130
MSN3823-BS	1330-20-7	Xylene (total)	BSP	REC	114	%	70-130
MSN3823-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	99	%	70-130
MSN3823-BS	2037-26-5	Toluene-D8	BSP	SURR	99	%	70-130
MSN3823-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	90	%	70-130
MSN3823-BSD	67-64-1	Acetone	BSD	REC	115	%	70-130
MSN3823-BSD	67-64-1	Acetone	BSD	RPD	4	%	20
MSN3823-BSD	71-43-2	Benzene	BSD	REC	102	%	70-130
MSN3823-BSD	71-43-2	Benzene	BSD	RPD	0	%	20
MSN3823-BSD	108-86-1	Bromobenzene	BSD	REC	110	%	70-130
MSN3823-BSD	108-86-1	Bromobenzene	BSD	RPD	2	%	20
MSN3823-BSD	74-97-5	Bromochloromethane	BSD	REC	105	%	70-130
MSN3823-BSD	74-97-5	Bromochloromethane	BSD	RPD	3	%	20
MSN3823-BSD	75-27-4	Bromodichloromethane	BSD	REC	108	%	70-130
MSN3823-BSD	75-27-4	Bromodichloromethane	BSD	RPD	1	%	20
MSN3823-BSD	75-25-2	Bromoform	BSD	REC	108	%	70-130
MSN3823-BSD	75-25-2	Bromoform	BSD	RPD	1	%	20

* Sample used for QC is not from job MC47407

QC Evaluation: MA MCP Limits

Job Number: MC47407
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/17/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSN3823-BSD	74-83-9	Bromomethane	BSD	REC	113	%	70-130
MSN3823-BSD	74-83-9	Bromomethane	BSD	RPD	6	%	20
MSN3823-BSD	78-93-3	2-Butanone (MEK)	BSD	REC	108	%	70-130
MSN3823-BSD	78-93-3	2-Butanone (MEK)	BSD	RPD	3	%	20
MSN3823-BSD	104-51-8	n-Butylbenzene	BSD	REC	120	%	70-130
MSN3823-BSD	104-51-8	n-Butylbenzene	BSD	RPD	2	%	20
MSN3823-BSD	135-98-8	sec-Butylbenzene	BSD	REC	115	%	70-130
MSN3823-BSD	135-98-8	sec-Butylbenzene	BSD	RPD	2	%	20
MSN3823-BSD	98-06-6	tert-Butylbenzene	BSD	REC	113	%	70-130
MSN3823-BSD	98-06-6	tert-Butylbenzene	BSD	RPD	3	%	20
MSN3823-BSD	75-15-0	Carbon disulfide	BSD	REC	79	%	70-130
MSN3823-BSD	75-15-0	Carbon disulfide	BSD	RPD	4	%	20
MSN3823-BSD	56-23-5	Carbon tetrachloride	BSD	REC	113	%	70-130
MSN3823-BSD	56-23-5	Carbon tetrachloride	BSD	RPD	2	%	20
MSN3823-BSD	108-90-7	Chlorobenzene	BSD	REC	112	%	70-130
MSN3823-BSD	108-90-7	Chlorobenzene	BSD	RPD	2	%	20
MSN3823-BSD	75-00-3	Chloroethane	BSD	REC	96	%	70-130
MSN3823-BSD	75-00-3	Chloroethane	BSD	RPD	2	%	20
MSN3823-BSD	67-66-3	Chloroform	BSD	REC	105	%	70-130
MSN3823-BSD	67-66-3	Chloroform	BSD	RPD	2	%	20
MSN3823-BSD	74-87-3	Chloromethane	BSD	REC	110	%	70-130
MSN3823-BSD	74-87-3	Chloromethane	BSD	RPD	3	%	20
MSN3823-BSD	95-49-8	o-Chlorotoluene	BSD	REC	105	%	70-130
MSN3823-BSD	95-49-8	o-Chlorotoluene	BSD	RPD	2	%	20
MSN3823-BSD	106-43-4	p-Chlorotoluene	BSD	REC	109	%	70-130
MSN3823-BSD	106-43-4	p-Chlorotoluene	BSD	RPD	2	%	20
MSN3823-BSD	108-20-3	Di-Isopropyl ether	BSD	REC	97	%	70-130
MSN3823-BSD	108-20-3	Di-Isopropyl ether	BSD	RPD	2	%	20
MSN3823-BSD	96-12-8	1,2-Dibromo-3-chloropropane	BSD	REC	110	%	70-130
MSN3823-BSD	96-12-8	1,2-Dibromo-3-chloropropane	BSD	RPD	0	%	20
MSN3823-BSD	124-48-1	Dibromochloromethane	BSD	REC	122	%	70-130
MSN3823-BSD	124-48-1	Dibromochloromethane	BSD	RPD	2	%	20
MSN3823-BSD	106-93-4	1,2-Dibromoethane	BSD	REC	119	%	70-130
MSN3823-BSD	106-93-4	1,2-Dibromoethane	BSD	RPD	3	%	20
MSN3823-BSD	95-50-1	1,2-Dichlorobenzene	BSD	REC	113	%	70-130
MSN3823-BSD	95-50-1	1,2-Dichlorobenzene	BSD	RPD	0	%	20
MSN3823-BSD	541-73-1	1,3-Dichlorobenzene	BSD	REC	112	%	70-130
MSN3823-BSD	541-73-1	1,3-Dichlorobenzene	BSD	RPD	2	%	20
MSN3823-BSD	106-46-7	1,4-Dichlorobenzene	BSD	REC	111	%	70-130
MSN3823-BSD	106-46-7	1,4-Dichlorobenzene	BSD	RPD	1	%	20
MSN3823-BSD	75-71-8	Dichlorodifluoromethane	BSD	REC	113	%	70-130
MSN3823-BSD	75-71-8	Dichlorodifluoromethane	BSD	RPD	5	%	20
MSN3823-BSD	75-34-3	1,1-Dichloroethane	BSD	REC	96	%	70-130
MSN3823-BSD	75-34-3	1,1-Dichloroethane	BSD	RPD	3	%	20
MSN3823-BSD	107-06-2	1,2-Dichloroethane	BSD	REC	99	%	70-130

* Sample used for QC is not from job MC47407

QC Evaluation: MA MCP Limits

Job Number: MC47407
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/17/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSN3823-BSD	107-06-2	1,2-Dichloroethane	BSD	RPD	0	%	20
MSN3823-BSD	75-35-4	1,1-Dichloroethene	BSD	REC	93	%	70-130
MSN3823-BSD	75-35-4	1,1-Dichloroethene	BSD	RPD	4	%	20
MSN3823-BSD	156-59-2	cis-1,2-Dichloroethene	BSD	REC	108	%	70-130
MSN3823-BSD	156-59-2	cis-1,2-Dichloroethene	BSD	RPD	2	%	20
MSN3823-BSD	156-60-5	trans-1,2-Dichloroethene	BSD	REC	92	%	70-130
MSN3823-BSD	156-60-5	trans-1,2-Dichloroethene	BSD	RPD	5	%	20
MSN3823-BSD	78-87-5	1,2-Dichloropropane	BSD	REC	101	%	70-130
MSN3823-BSD	78-87-5	1,2-Dichloropropane	BSD	RPD	0	%	20
MSN3823-BSD	142-28-9	1,3-Dichloropropane	BSD	REC	115	%	70-130
MSN3823-BSD	142-28-9	1,3-Dichloropropane	BSD	RPD	1	%	20
MSN3823-BSD	594-20-7	2,2-Dichloropropane	BSD	REC	106	%	70-130
MSN3823-BSD	594-20-7	2,2-Dichloropropane	BSD	RPD	2	%	20
MSN3823-BSD	563-58-6	1,1-Dichloropropene	BSD	REC	107	%	70-130
MSN3823-BSD	563-58-6	1,1-Dichloropropene	BSD	RPD	0	%	20
MSN3823-BSD	10061-01-5	cis-1,3-Dichloropropene	BSD	REC	105	%	70-130
MSN3823-BSD	10061-01-5	cis-1,3-Dichloropropene	BSD	RPD	1	%	20
MSN3823-BSD	10061-02-6	trans-1,3-Dichloropropene	BSD	REC	101	%	70-130
MSN3823-BSD	10061-02-6	trans-1,3-Dichloropropene	BSD	RPD	0	%	20
MSN3823-BSD	123-91-1	1,4-Dioxane	BSD	REC	100	%	70-130
MSN3823-BSD	123-91-1	1,4-Dioxane	BSD	RPD	24	%	20
MSN3823-BSD	60-29-7	Ethyl Ether	BSD	REC	90	%	70-130
MSN3823-BSD	60-29-7	Ethyl Ether	BSD	RPD	2	%	20
MSN3823-BSD	100-41-4	Ethylbenzene	BSD	REC	115	%	70-130
MSN3823-BSD	100-41-4	Ethylbenzene	BSD	RPD	2	%	20
MSN3823-BSD	87-68-3	Hexachlorobutadiene	BSD	REC	132	%	70-130
MSN3823-BSD	87-68-3	Hexachlorobutadiene	BSD	RPD	5	%	20
MSN3823-BSD	591-78-6	2-Hexanone	BSD	REC	128	%	70-130
MSN3823-BSD	591-78-6	2-Hexanone	BSD	RPD	2	%	20
MSN3823-BSD	98-82-8	Isopropylbenzene	BSD	REC	109	%	70-130
MSN3823-BSD	98-82-8	Isopropylbenzene	BSD	RPD	3	%	20
MSN3823-BSD	99-87-6	p-Isopropyltoluene	BSD	REC	119	%	70-130
MSN3823-BSD	99-87-6	p-Isopropyltoluene	BSD	RPD	2	%	20
MSN3823-BSD	1634-04-4	Methyl Tert Butyl Ether	BSD	REC	105	%	70-130
MSN3823-BSD	1634-04-4	Methyl Tert Butyl Ether	BSD	RPD	3	%	20
MSN3823-BSD	108-10-1	4-Methyl-2-pentanone (MIBK)	BSD	REC	113	%	70-130
MSN3823-BSD	108-10-1	4-Methyl-2-pentanone (MIBK)	BSD	RPD	1	%	20
MSN3823-BSD	74-95-3	Methylene bromide	BSD	REC	104	%	70-130
MSN3823-BSD	74-95-3	Methylene bromide	BSD	RPD	1	%	20
MSN3823-BSD	75-09-2	Methylene chloride	BSD	REC	92	%	70-130
MSN3823-BSD	75-09-2	Methylene chloride	BSD	RPD	3	%	20
MSN3823-BSD	91-20-3	Naphthalene	BSD	REC	117	%	70-130
MSN3823-BSD	91-20-3	Naphthalene	BSD	RPD	4	%	20
MSN3823-BSD	103-65-1	n-Propylbenzene	BSD	REC	109	%	70-130
MSN3823-BSD	103-65-1	n-Propylbenzene	BSD	RPD	3	%	20

* Sample used for QC is not from job MC47407

QC Evaluation: MA MCP Limits

Job Number: MC47407
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/17/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSN3823-BSD	100-42-5	Styrene	BSD	REC	122	%	70-130
MSN3823-BSD	100-42-5	Styrene	BSD	RPD	4	%	20
MSN3823-BSD	994-05-8	tert-Amyl Methyl Ether	BSD	REC	104	%	70-130
MSN3823-BSD	994-05-8	tert-Amyl Methyl Ether	BSD	RPD	0	%	20
MSN3823-BSD	637-92-3	tert-Butyl Ethyl Ether	BSD	REC	100	%	70-130
MSN3823-BSD	637-92-3	tert-Butyl Ethyl Ether	BSD	RPD	1	%	20
MSN3823-BSD	630-20-6	1,1,1,2-Tetrachloroethane	BSD	REC	122	%	70-130
MSN3823-BSD	630-20-6	1,1,1,2-Tetrachloroethane	BSD	RPD	3	%	20
MSN3823-BSD	79-34-5	1,1,2,2-Tetrachloroethane	BSD	REC	110	%	70-130
MSN3823-BSD	79-34-5	1,1,2,2-Tetrachloroethane	BSD	RPD	1	%	20
MSN3823-BSD	127-18-4	Tetrachloroethene	BSD	REC	118	%	70-130
MSN3823-BSD	127-18-4	Tetrachloroethene	BSD	RPD	3	%	20
MSN3823-BSD	109-99-9	Tetrahydrofuran	BSD	REC	89	%	70-130
MSN3823-BSD	109-99-9	Tetrahydrofuran	BSD	RPD	1	%	20
MSN3823-BSD	108-88-3	Toluene	BSD	REC	108	%	70-130
MSN3823-BSD	108-88-3	Toluene	BSD	RPD	1	%	20
MSN3823-BSD	87-61-6	1,2,3-Trichlorobenzene	BSD	REC	127	%	70-130
MSN3823-BSD	87-61-6	1,2,3-Trichlorobenzene	BSD	RPD	5	%	25
MSN3823-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	REC	118	%	70-130
MSN3823-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	RPD	3	%	20
MSN3823-BSD	71-55-6	1,1,1-Trichloroethane	BSD	REC	109	%	70-130
MSN3823-BSD	71-55-6	1,1,1-Trichloroethane	BSD	RPD	3	%	20
MSN3823-BSD	79-00-5	1,1,2-Trichloroethane	BSD	REC	111	%	70-130
MSN3823-BSD	79-00-5	1,1,2-Trichloroethane	BSD	RPD	0	%	20
MSN3823-BSD	79-01-6	Trichloroethene	BSD	REC	105	%	70-130
MSN3823-BSD	79-01-6	Trichloroethene	BSD	RPD	1	%	20
MSN3823-BSD	75-69-4	Trichlorofluoromethane	BSD	REC	106	%	70-130
MSN3823-BSD	75-69-4	Trichlorofluoromethane	BSD	RPD	5	%	20
MSN3823-BSD	96-18-4	1,2,3-Trichloropropane	BSD	REC	110	%	70-130
MSN3823-BSD	96-18-4	1,2,3-Trichloropropane	BSD	RPD	2	%	20
MSN3823-BSD	95-63-6	1,2,4-Trimethylbenzene	BSD	REC	109	%	70-130
MSN3823-BSD	95-63-6	1,2,4-Trimethylbenzene	BSD	RPD	2	%	20
MSN3823-BSD	108-67-8	1,3,5-Trimethylbenzene	BSD	REC	110	%	70-130
MSN3823-BSD	108-67-8	1,3,5-Trimethylbenzene	BSD	RPD	2	%	20
MSN3823-BSD	75-01-4	Vinyl chloride	BSD	REC	97	%	70-130
MSN3823-BSD	75-01-4	Vinyl chloride	BSD	RPD	4	%	20
MSN3823-BSD		m,p-Xylene	BSD	REC	117	%	70-130
MSN3823-BSD		m,p-Xylene	BSD	RPD	3	%	20
MSN3823-BSD	95-47-6	o-Xylene	BSD	REC	118	%	70-130
MSN3823-BSD	95-47-6	o-Xylene	BSD	RPD	3	%	20
MSN3823-BSD	1330-20-7	Xylene (total)	BSD	REC	117	%	70-130
MSN3823-BSD	1330-20-7	Xylene (total)	BSD	RPD	3	%	20
MSN3823-BSD	1868-53-7	Dibromofluoromethane	BSD	SURR	99	%	70-130
MSN3823-BSD	2037-26-5	Toluene-D8	BSD	SURR	98	%	70-130
MSN3823-BSD	460-00-4	4-Bromofluorobenzene	BSD	SURR	90	%	70-130

* Sample used for QC is not from job MC47407

QC Evaluation: MA MCP Limits

Job Number: MC47407
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/17/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSN3823-MB	1868-53-7	Dibromofluoromethane	MB	SURR	99	%	70-130
MSN3823-MB	2037-26-5	Toluene-D8	MB	SURR	97	%	70-130
MSN3823-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	91	%	70-130
MC47407-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	70-130
MC47407-1	2037-26-5	Toluene-D8	SAMP	SURR	98	%	70-130
MC47407-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	93	%	70-130
MC47407-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	70-130
MC47407-2	2037-26-5	Toluene-D8	SAMP	SURR	99	%	70-130
MC47407-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	92	%	70-130
MC47407-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	70-130
MC47407-3	2037-26-5	Toluene-D8	SAMP	SURR	98	%	70-130
MC47407-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	93	%	70-130
MC47407-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	70-130
MC47407-4	2037-26-5	Toluene-D8	SAMP	SURR	98	%	70-130
MC47407-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	94	%	70-130
MC47407-6	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	70-130
MC47407-6	2037-26-5	Toluene-D8	SAMP	SURR	99	%	70-130
MC47407-6	460-00-4	4-Bromofluorobenzene	SAMP	SURR	95	%	70-130
MC47407-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	70-130
MC47407-7	2037-26-5	Toluene-D8	SAMP	SURR	98	%	70-130
MC47407-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	93	%	70-130
MC47407-8	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	70-130
MC47407-8	2037-26-5	Toluene-D8	SAMP	SURR	97	%	70-130
MC47407-8	460-00-4	4-Bromofluorobenzene	SAMP	SURR	94	%	70-130
MC47407-9	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	70-130
MC47407-9	2037-26-5	Toluene-D8	SAMP	SURR	97	%	70-130
MC47407-9	460-00-4	4-Bromofluorobenzene	SAMP	SURR	94	%	70-130
MC47407-10	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	70-130
MC47407-10	2037-26-5	Toluene-D8	SAMP	SURR	99	%	70-130
MC47407-10	460-00-4	4-Bromofluorobenzene	SAMP	SURR	94	%	70-130

* Sample used for QC is not from job MC47407

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3823-MB	N104275 D	1	08/25/16	MC	n/a	n/a	MSN3823

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
71-43-2	Benzene	ND	0 50	ug/l	
108-86-1	Bromobenzene	ND	5 0	ug/l	
74-97-5	Bromochloromethane	ND	5 0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1 0	ug/l	
74-83-9	Bromomethane	ND	2 0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	5 0	ug/l	
135-98-8	sec-Butylbenzene	ND	5 0	ug/l	
98-06-6	tert-Butylbenzene	ND	5 0	ug/l	
75-15-0	Carbon disulfide	ND	5 0	ug/l	
56-23-5	Carbon tetrachloride	ND	1 0	ug/l	
108-90-7	Chlorobenzene	ND	1 0	ug/l	
75-00-3	Chloroethane	ND	2 0	ug/l	
67-66-3	Chloroform	ND	1 0	ug/l	
74-87-3	Chloromethane	ND	2 0	ug/l	
95-49-8	o-Chlorotoluene	ND	5 0	ug/l	
106-43-4	p-Chlorotoluene	ND	5 0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2 0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5 0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1 0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1 0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1 0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1 0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2 0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1 0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1 0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1 0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1 0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1 0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2 0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5 0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5 0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5 0	ug/l	

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3823-MB	N104275 D	1	08/25/16	MC	n/a	n/a	MSN3823

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0 50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0 50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
60-29-7	Ethyl Ether	ND	5 0	ug/l	
100-41-4	Ethylbenzene	ND	1 0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5 0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
98-82-8	Isopropylbenzene	ND	5 0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5 0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1 0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5 0	ug/l	
74-95-3	Methylene bromide	ND	5 0	ug/l	
75-09-2	Methylene chloride	ND	2 0	ug/l	
91-20-3	Naphthalene	1 2	5 0	ug/l	J
103-65-1	n-Propylbenzene	ND	5 0	ug/l	
100-42-5	Styrene	ND	5 0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2 0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2 0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0 50	ug/l	
127-18-4	Tetrachloroethene	ND	1 0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1 0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.95	5 0	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	0 93	5 0	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1 0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1 0	ug/l	
79-01-6	Trichloroethene	ND	1 0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1 0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5 0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5 0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5 0	ug/l	
75-01-4	Vinyl chloride	ND	1 0	ug/l	
	m,p-Xylene	ND	1 0	ug/l	
95-47-6	o-Xylene	ND	1 0	ug/l	
1330-20-7	Xylene (total)	ND	1 0	ug/l	

Method Blank Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3823-MB	N104275.D	1	08/25/16	MC	n/a	n/a	MSN3823

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	76-129%
2037-26-5	Toluene-D8	97%	83-114%
460-00-4	4-Bromofluorobenzene	91%	75-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3823-BS	N104272.D	1	08/25/16	MC	n/a	n/a	MSN3823
MSN3823-BSD	N104273.D	1	08/25/16	MC	n/a	n/a	MSN3823

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	55.1	110	57.5	115	4	24-200/25
71-43-2	Benzene	50	51.0	102	51.1	102	0	66-123/25
108-86-1	Bromobenzene	50	53.9	108	54.8	110	2	73-124/25
74-97-5	Bromochloromethane	50	50.9	102	52.6	105	3	65-127/25
75-27-4	Bromodichloromethane	50	54.6	109	54.1	108	1	68-130/25
75-25-2	Bromoform	50	53.2	106	53.8	108	1	61-149/25
74-83-9	Bromomethane	50	53.0	106	56.5	113	6	52-151/25
78-93-3	2-Butanone (MEK)	50	52.3	105	53.9	108	3	45-171/25
104-51-8	n-Butylbenzene	50	58.5	117	59.9	120	2	80-134/30
135-98-8	sec-Butylbenzene	50	56.4	113	57.5	115	2	77-132/25
98-06-6	tert-Butylbenzene	50	55.3	111	56.7	113	3	71-130/25
75-15-0	Carbon disulfide	50	38.0	76	39.7	79	4	24-164/25
56-23-5	Carbon tetrachloride	50	55.1	110	56.4	113	2	54-151/25
108-90-7	Chlorobenzene	50	54.9	110	56.0	112	2	75-117/25
75-00-3	Chloroethane	50	46.9	94	48.0	96	2	54-160/25
67-66-3	Chloroform	50	51.2	102	52.3	105	2	65-127/25
74-87-3	Chloromethane	50	53.3	107	55.0	110	3	43-154/25
95-49-8	o-Chlorotoluene	50	51.3	103	52.4	105	2	71-128/25
106-43-4	p-Chlorotoluene	50	53.4	107	54.5	109	2	71-125/25
108-20-3	Di-Isopropyl ether	50	47.9	96	48.7	97	2	58-143/50
96-12-8	1,2-Dibromo-3-chloropropane	50	54.6	109	54.8	110	0	53-145/25
124-48-1	Dibromochloromethane	50	60.1	120	61.1	122	2	67-137/25
106-93-4	1,2-Dibromoethane	50	57.8	116	59.3	119	3	73-126/25
95-50-1	1,2-Dichlorobenzene	50	56.7	113	56.6	113	0	75-124/25
541-73-1	1,3-Dichlorobenzene	50	55.2	110	56.1	112	2	76-120/25
106-46-7	1,4-Dichlorobenzene	50	55.3	111	55.6	111	1	77-117/25
75-71-8	Dichlorodifluoromethane	50	54.0	108	56.5	113	5	20-161/25
75-34-3	1,1-Dichloroethane	50	46.7	93	48.1	96	3	55-128/25
107-06-2	1,2-Dichloroethane	50	49.6	99	49.7	99	0	68-126/25
75-35-4	1,1-Dichloroethene	50	45.0	90	46.7	93	4	44-148/25
156-59-2	cis-1,2-Dichloroethene	50	52.5	105	53.8	108	2	63-132/25
156-60-5	trans-1,2-Dichloroethene	50	43.9	88	46.0	92	5	54-127/25
78-87-5	1,2-Dichloropropane	50	50.7	101	50.6	101	0	68-123/25
142-28-9	1,3-Dichloropropane	50	56.8	114	57.4	115	1	75-130/25
594-20-7	2,2-Dichloropropane	50	52.3	105	53.2	106	2	47-156/25
563-58-6	1,1-Dichloropropene	50	53.6	107	53.7	107	0	65-123/25

* = Outside of Control Limits

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3823-BS	N104272 D	1	08/25/16	MC	n/a	n/a	MSN3823
MSN3823-BSD	N104273 D	1	08/25/16	MC	n/a	n/a	MSN3823

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	53 0	106	52 7	105	1	61-145/25
10061-02-6	trans-1,3-Dichloropropene	50	50 5	101	50 3	101	0	60-134/25
123-91-1	1,4-Dioxane	250	317	127	250	100	24	20-167/25
60-29-7	Ethyl Ether	50	43 8	88	44 9	90	2	45-152/25
100-41-4	Ethylbenzene	50	55 9	112	57 3	115	2	74-127/25
87-68-3	Hexachlorobutadiene	50	63 2	126	66 2	132	5	71-141/25
591-78-6	2-Hexanone	50	63 2	126	64 2	128	2	44-166/25
98-82-8	Isopropylbenzene	50	53 0	106	54 4	109	3	70-131/25
99-87-6	p-Isopropyltoluene	50	58 0	116	59 4	119	2	79-131/25
1634-04-4	Methyl Tert Butyl Ether	50	50 8	102	52 3	105	3	59-135/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	56 7	113	56 4	113	1	63-138/25
74-95-3	Methylene bromide	50	52 3	105	52 0	104	1	70-124/25
75-09-2	Methylene chloride	50	44 5	89	46 0	92	3	54-132/25
91-20-3	Naphthalene	50	56 1	112	58 4	117	4	37-145/25
103-65-1	n-Propylbenzene	50	53 0	106	54 7	109	3	71-128/25
100-42-5	Styrene	50	59 0	118	61 2	122	4	76-130/25
994-05-8	tert-Amyl Methyl Ether	50	51 8	104	52 0	104	0	63-131/25
637-92-3	tert-Butyl Ethyl Ether	50	49 4	99	50 0	100	1	59-134/300
630-20-6	1,1,1,2-Tetrachloroethane	50	59 4	119	61 0	122	3	71-139/25
79-34-5	1,1,2,2-Tetrachloroethane	50	54 6	109	55 2	110	1	62-130/25
127-18-4	Tetrachloroethene	50	57 1	114	58 8	118	3	68-133/25
109-99-9	Tetrahydrofuran	50	43 7	87	44 3	89	1	52-131/25
108-88-3	Toluene	50	53 9	108	54 2	108	1	73-124/25
87-61-6	1,2,3-Trichlorobenzene	50	60 5	121	63 3	127	5	58-144/25
120-82-1	1,2,4-Trichlorobenzene	50	57 2	114	58 9	118	3	63-137/25
71-55-6	1,1,1-Trichloroethane	50	53 0	106	54 5	109	3	60-135/25
79-00-5	1,1,2-Trichloroethane	50	55 5	111	55 3	111	0	72-125/25
79-01-6	Trichloroethene	50	52 0	104	52 6	105	1	73-120/25
75-69-4	Trichlorofluoromethane	50	50 4	101	53 0	106	5	52-152/25
96-18-4	1,2,3-Trichloropropane	50	54 2	108	55 2	110	2	56-136/25
95-63-6	1,2,4-Trimethylbenzene	50	53 3	107	54 6	109	2	76-125/25
108-67-8	1,3,5-Trimethylbenzene	50	54 0	108	55 1	110	2	76-132/25
75-01-4	Vinyl chloride	50	46 6	93	48 6	97	4	49-154/25
	m,p-Xylene	100	114	114	117	117	3	73-129/25
95-47-6	o-Xylene	50	57 5	115	59 0	118	3	73-128/25
1330-20-7	Xylene (total)	150	171	114	176	117	3	74-129/25

* = Outside of Control Limits

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3823-BS	N104272 D	1	08/25/16	MC	n/a	n/a	MSN3823
MSN3823-BSD	N104273 D	1	08/25/16	MC	n/a	n/a	MSN3823

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	99%	76-129%
2037-26-5	Toluene-D8	99%	98%	83-114%
460-00-4	4-Bromofluorobenzene	90%	90%	75-124%

* = Outside of Control Limits

Volatile Internal Standard Area Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Check Std:	MSN3823-CC3802	**Injection Date:**	08/25/16
Lab File ID:	N104271.D	**Injection Time:**	09:26
Instrument ID:	GCMSN	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	615052	10.33	347055	13.51	157687	7.45	371489	9.46	310176	16.07
Upper Limit [a]	1230104	10.83	694110	14.01	315374	7.95	742978	9.96	620352	16.57
Lower Limit [b]	307526	9.83	173528	13.01	78844	6.95	185745	8.96	155088	15.57

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3823-BS	609937	10.33	343329	13.51	161371	7.45	373463	9.46	312294	16.07
MSN3823-BSD	619846	10.33	344640	13.51	160800	7.45	370592	9.46	314998	16.07
MSN3823-MB	606638	10.33	342510	13.51	174361	7.46	362947	9.46	291774	16.07
777777	609388	10.33	344765	13.51	180643	7.46	357318	9.46	299793	16.07
777777	609388	10.33	344765	13.51	180643	7.46	357318	9.46	299793	16.07
777777	599974	10.33	343509	13.51	175117	7.46	357030	9.46	287583	16.07
777777	599069	10.33	344622	13.51	148194	7.45	360471	9.46	306336	16.07
777777	615426	10.33	346483	13.51	177853	7.46	367714	9.46	289721	16.07
MC47407-1	608500	10.33	346805	13.51	176020	7.46	360850	9.46	291427	16.07
MC47407-2	606547	10.33	350681	13.51	173586	7.46	362691	9.46	295111	16.07
MC47407-3	602360	10.33	343885	13.51	167739	7.46	361123	9.46	291250	16.07
MC47407-4	612555	10.33	353363	13.51	180622	7.46	367719	9.46	290218	16.07
MC47407-6	609550	10.33	346420	13.51	181392	7.46	365013	9.46	287465	16.07
MC47407-7	609518	10.33	348724	13.51	185497	7.46	364041	9.46	292524	16.07
MC47407-8	614891	10.33	350852	13.51	186326	7.46	367117	9.46	290327	16.07
MC47407-9	608675	10.33	351795	13.51	185209	7.46	357916	9.46	294829	16.07
MC47407-10	598624	10.33	347521	13.51	174298	7.46	356184	9.46	288540	16.07
777777	600578	10.33	344510	13.51	161503	7.46	354545	9.46	293582	16.07
777777	611917	10.33	351714	13.51	184706	7.46	362467	9.46	290672	16.07
777777	610019	10.33	348020	13.51	182398	7.46	362907	9.46	292705	16.07
777777	606418	10.33	348388	13.51	177417	7.46	356864	9.46	295196	16.07
777777	607297	10.33	347778	13.51	183619	7.46	360174	9.46	289762	16.07
777777	607811	10.33	348116	13.51	181611	7.46	356724	9.46	296023	16.07
MSN3823-I-CC380219327		10.33	349222	13.51	172800	7.45	362362	9.46	314356	16.07

IS 1 = 1,4-Difluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = Tert Butyl Alcohol-D9
IS 4 = Pentafluorobenzene
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area, Retention time + 0.5 minutes
(b) Lower Limit = -50% of check standard area, Retention time -0.5 minutes

Volatile Surrogate Recovery Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method:	SW846 8260C	**Matrix:**	AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC47407-1	N104280.D	100	98	93
MC47407-2	N104281.D	99	99	92
MC47407-3	N104282.D	99	98	93
MC47407-4	N104283.D	99	98	94
MC47407-6	N104284.D	99	99	95
MC47407-7	N104285.D	99	98	93
MC47407-8	N104286.D	99	97	94
MC47407-9	N104287.D	100	97	94
MC47407-10	N104288.D	100	99	94
MSN3823-BS	N104272.D	99	99	90
MSN3823-BSD	N104273.D	99	98	90
MSN3823-MB	N104275.D	99	97	91

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	76-129%
S2 = Toluene-D8	83-114%
S3 = 4-Bromofluorobenzene	75-124%

GC Volatiles

QC Data Summaries

7

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH2374-MB	BH39906.D	1	08/22/16	DF	n/a	n/a	GBH2374

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	3.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5- C8 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5- C8 Aliphatics	ND	50	ug/l	
	C9- C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries		Limits
	2,3,4-Trifluorotoluene	81%	70-130%
	2,3,4-Trifluorotoluene	83%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH2374-BSP	BH39907.D	1	08/22/16	DF	n/a	n/a	GBH2374
GBH2374-BSD	BH39908.D	1	08/22/16	DF	n/a	n/a	GBH2374

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	46.7	93	49.6	99	6	70-130/25
100-41-4	Ethylbenzene	50	45.0	90	47.5	95	5	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	49.5	99	52.8	106	6	70-130/25
91-20-3	Naphthalene	50	49.6	99	51.5	103	4	70-130/25
108-88-3	Toluene	50	45.7	91	48.6	97	6	70-130/25
	m,p-Xylene	100	91.3	91	95.7	96	5	70-130/25
95-47-6	o-Xylene	50	45.6	91	48.3	97	6	70-130/25
	C5- C8 Aliphatics (Unadj.)	150	138	92	145	97	5	70-130/25
	C9- C12 Aliphatics (Unadj.)	150	129	86	136	91	5	70-130/25
	C9- C10 Aromatics (Unadj.)	50	46.2	92	48.2	96	4	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	2,3,4-Trifluorotoluene	89%	93%	70-130%
	2,3,4-Trifluorotoluene	91%	94%	70-130%

* Outside of Control Limits

7.2.1

7

Volatile Surrogate Recovery Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: MADEP VPH REV 1.1 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	SI [a]	SI [b]
MC47407-1	BH39916.D	83	83
MC47407-2	BH39917.D	83	83
MC47407-3	BH39918.D	84	84
MC47407-4	BH39919.D	83	83
MC47407-6	BH39920.D	83	83
MC47407-7	BH39921.D	81	81
MC47407-8	BH39922.D	81	82
MC47407-9	BH39923.D	82	83
MC47407-10	BH39924.D	82	82
GBH2374-BSD	BH39908.D	93	94
GBH2374-BSP	BH39907.D	89	91
GBH2374-MB	BH39906.D	81	83

Surrogate Compounds	Recovery Limits
SI = 2,3,4-Trifluorotoluene	70-130%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

7.3.1

7

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48508-MB	DE15349 D	1	08/26/16	TA	08/22/16	OP48508	GDE856

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1 1

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-5, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5 0	ug/l	
208-96-8	Acenaphthylene	ND	5 0	ug/l	
120-12-7	Anthracene	ND	5 0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5 0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5 0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5 0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5 0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5 0	ug/l	
218-01-9	Chrysene	ND	5 0	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	5 0	ug/l	
206-44-0	Fluoranthene	ND	5 0	ug/l	
86-73-7	Fluorene	ND	5 0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5 0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5 0	ug/l	
91-20-3	Naphthalene	ND	5 0	ug/l	
85-01-8	Phenanthrene	ND	5 0	ug/l	
129-00-0	Pyrene	ND	5 0	ug/l	
	C11-C22 Aromatics (Unadj)	33 4	100	ug/l	J
	C9-C18 Aliphatics	26 2	100	ug/l	J
	C19-C36 Aliphatics	42 5	100	ug/l	J
	C11-C22 Aromatics	33.4	100	ug/l	J

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	78%	40-140%
321-60-8	2-Fluorobiphenyl	76%	40-140%
3386-33-2	1-Chlorooctadecane	88%	40-140%
580-13-2	2-Bromonaphthalene	90%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48508-BS	DE15350.D	1	08/26/16	TA	08/22/16	OP48508	GDE856
OP48508-BSD	DE15351.D	1	08/26/16	TA	08/22/16	OP48508	GDE856

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-5, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	50	28.6	57	34.9	70	20	40-140/25
208-96-8	Acenaphthylene	50	27.1	54	33.3	67	21	40-140/25
120-12-7	Anthracene	50	29.5	59	37.1	74	23	40-140/25
56-55-3	Benzo(a)anthracene	50	37.3	75	46.7	93	22	40-140/25
50-32-8	Benzo(a)pyrene	50	37.7	75	46.1	92	20	40-140/25
205-99-2	Benzo(b)fluoranthene	50	40.4	81	51.9	104	25	40-140/25
191-24-2	Benzo(g,h,i)perylene	50	42.7	85	51.7	103	19	40-140/25
207-08-9	Benzo(k)fluoranthene	50	35.1	70	41.8	84	17	40-140/25
218-01-9	Chrysene	50	35.2	70	43.8	88	22	40-140/25
53-70-3	Dibenz(a,h)anthracene	50	41.2	82	49.8	100	19	40-140/25
206-44-0	Fluoranthene	50	34.9	70	44.3	89	24	40-140/25
86-73-7	Fluorene	50	30.1	60	37.1	74	21	40-140/25
193-39-5	Indeno(1,2,3-cd)pyrene	50	39.0	78	48.5	97	22	40-140/25
91-57-6	2-Methylnaphthalene	50	28.2	56	34.5	69	20	40-140/25
91-20-3	Naphthalene	50	23.1	46	28.5	57	21	40-140/25
85-01-8	Phenanthrene	50	32.2	64	40.9	82	24	40-140/25
129-00-0	Pyrene	50	33.5	67	43.5	87	26* a	40-140/25
	C11-C22 Aromatics (Unadj.)	800	641	80	778	97	19	40-140/25
	C9-C18 Aliphatics	300	230	77	229	76	0	40-140/25
	C19-C36 Aliphatics	400	335	84	333	83	1	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	71%	89%	40-140%
321-60-8	2-Fluorobiphenyl	70%	84%	40-140%
3386-33-2	1-Chlorooctadecane	87%	92%	40-140%
580-13-2	2-Bromonaphthalene	71%	85%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP48508-BS	2-Methylnaphthalene	28.2	ND	0.0%	5.0
OP48508-BS	Naphthalene	23.1	ND	0.0%	5.0
OP48508-BSD	2-Methylnaphthalene	34.5	ND	0.0%	5.0
OP48508-BSD	Naphthalene	28.5	ND	0.0%	5.0

* = Outside of Control Limits

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48508-BS	DE15350.D	1	08/26/16	TA	08/22/16	OP48508	GDE856
OP48508-BSD	DE15351.D	1	08/26/16	TA	08/22/16	OP48508	GDE856

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC47407-1, MC47407-2, MC47407-3, MC47407-4, MC47407-5, MC47407-6, MC47407-7, MC47407-8, MC47407-9, MC47407-10

(a) Target recovery satisfactory

* = Outside of Control Limits

Semivolatile Surrogate Recovery Summary

Job Number: MC47407
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: MADEP EPH REV 1 1 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]	S3 [b]	S4 [a]
MC47407-1	DE15352 D	69	66	84	65
MC47407-2	DE15353 D	72	67	78	78
MC47407-3	DE15354 D	76	75	79	88
MC47407-4	DE15355 D	61	61	76	60
MC47407-5	DE15356 D	70	68	79	80
MC47407-6	DE15357 D	76	69	74	80
MC47407-7	DE15358 D	77	76	76	89
MC47407-8	DE15360 D	72	70	69	83
MC47407-9	DE15361 D	70	70	80	81
MC47407-10	DE15362 D	80	77	81	91
OP48508-BS	DE15350 D	71	70	87	71
OP48508-BSD	DE15351 D	89	84	92	85
OP48508-MB	DE15349 D	78	76	88	90

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 2-Fluorobiphenyl	40-140%
S3 = 1-Chlorooctadecane	40-140%
S4 = 2-Bromonaphthalene	40-140%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Matrix: W4[illegible]

Prep Date: 08/22/16 08/22/16

Metal	RL	IDL	MDL	MB raw	MB Final	MS raw	MS Final
Aluminum	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.9
[illegible]	[illegible]	[illegible]	[illegible]	1.1	[illegible]	[illegible]	<4.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	<4	[illegible]	<4.0	[illegible]	<4.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.0	[illegible]	4.3
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<10	[illegible]	<10
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47407
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26664
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			08/22/16				08/22/16		
Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
Aluminum	anr								
Antimony	503	500	100.6	80-120	505	500	101.0	0.4	20
Arsenic	498	500	99.6	80-120	503	500	100.6	1.0	20
Barium	1960	2000	98.0	80-120	1970	2000	98.5	0.5	20
Beryllium	485	500	97.0	80-120	482	500	96.4	0.6	20
Bismuth									
Boron									
Cadmium	485	500	97.0	80-120	490	500	98.0	1.0	20
Calcium	anr								
Chromium	482	500	96.4	80-120	481	500	96.2	0.2	20
Cobalt	anr								
Copper	anr								
Gold									
Iron	anr								
Lead	975	1000	97.5	80-120	984	1000	98.4	0.9	20
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	488	500	97.6	80-120	494	500	98.8	1.2	20
Palladium									
Platinum									
Potassium	anr								
Selenium	505	500	101.0	80-120	508	500	101.6	0.6	20
Silicon									
Silver	185	200	92.5	80-120	185	200	92.5	0.0	20
Sodium	anr								
Sulfur									
Strontium									
Thallium	505	500	101.0	80-120	510	500	102.0	1.0	20
Tin									
Titanium									
Tungsten									

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47407
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26664
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			08/22/16				08/22/16		
Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
Vanadium	495	500	99.0	80-120	494	500	98.8	0.2	20
Zinc	523	500	104.6	80-120	529	500	105.8	1.1	20
Zirconium									

Associated samples MP26664: MC47407-1F, MC47407-2F, MC47407-3F, MC47407-4F, MC47407-6F, MC47407-7F, MC47407-8F, MC47407-9F, MC47407-10F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.1.2 9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC47407
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26670
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date:				08/23/16		08/23/16	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Mercury	0.20	.038	.034	-0.038	<0.20	-0.046	<0.20

Associated samples MP26670: MC47407-1F, MC47407-2F, MC47407-3F, MC47407-4F, MC47407-6F, MC47407-7F, MC47407-8F, MC47407-9F, MC47407-10F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.2.1

9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47407
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 351 Summer Street, Somerville, MA

QC Batch ID: MP26670
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date:				08/23/16					08/23/16	
Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit	
Mercury	2.5	3	83.3	80-120	3.0	3	100.0	18.2	20	

Associated samples MP26670: MC47407-1F, MC47407-2F, MC47407-3F, MC47407-4F, MC47407-6F, MC47407-7F, MC47407-8F, MC47407-9F, MC47407-10F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.2.2

9

SGS ACCUTEST
New England

04/10/17

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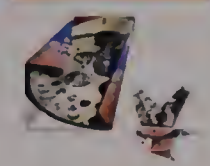

Technical Report for

EnviroTrac, Ltd

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

03 990202 00

SGS Accutest Job Number MC50005

Sampling Date 03/31/17

Report to

EnviroTrac
2 Merchant Street Suite 2
Sharon, MA 02067
craigb@envirotrac.com, jennifer@envirotrac.com

ATTN Craig Blake

Total number of pages in report 87

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable

Hamid (Brad) Madadian
Lab Director

Client Service contact Robert Soll 508-481-6200

Certifications MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NY (11791) NJ (MA926) PA (6801121) LA (AI171119) ND (R-188) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed

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SGS Accutest

Sample Summary

EnviroTrac, Ltd.

Job No: MC50005

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC50005-1	03/31/17	11 16	LMHH	04/03/17	AQ	Ground Water	MW-1
MC50005-1F	03/31/17	11 16	LMHH	04/03/17	AQ	Groundwater Filtered	MW-1
MC50005-2	03/31/17	10 14	LMHH	04/03/17	AQ	Ground Water	MW-2
MC50005-2F	03/31/17	10 14	LMHH	04/03/17	AQ	Groundwater Filtered	MW-2
MC50005-3	03/31/17	08 34	LMHH	04/03/17	AQ	Ground Water	MW-3
MC50005-3F	03/31/17	08 34	LMHH	04/03/17	AQ	Groundwater Filtered	MW-3
MC50005-4	03/31/17	09 21	LMHH	04/03/17	AQ	Ground Water	MW-103
MC50005-4F	03/31/17	09 21	LMHH	04/03/17	AQ	Groundwater Filtered	MW-103
MC50005-5	03/31/17	12 23	LMHH	04/03/17	AQ	Ground Water	MW-108
MC50005-5F	03/31/17	12 23	LMHH	04/03/17	AQ	Groundwater Filtered	MW-108
MC50005-6	03/31/17	10 31	LMHH	04/03/17	AQ	Ground Water	B-2/MW
MC50005-6F	03/31/17	10 31	LMHH	04/03/17	AQ	Groundwater Filtered	B-2/MW
MC50005-7	03/31/17	11 33	LMHH	04/03/17	AQ	Ground Water	B-3/MW

Sample Summary
(continued)

EnviroTrac, Ltd

Job No: MC50005

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No 03 990202 00

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC50005-7F	03/31/17	11 33	LMH	04/03/17	AQ	Groundwater Filtered	B-3/MW
MC50005-8	03/31/17	12 19	LMH	04/03/17	AQ	Ground Water	MW-105
MC50005-8F	03/31/17	12 19	LMH	04/03/17	AQ	Groundwater Filtered	MW-105
MC50005-9	03/31/17	09 37	LMH	04/03/17	AQ	Ground Water	MW-106
MC50005-9F	03/31/17	09 37	LMH	04/03/17	AQ	Groundwater Filtered	MW-106
MC50005-10	03/31/17	08 45	LMH	04/03/17	AQ	Ground Water	MW-107
MC50005-10F	03/31/17	08 45	LMH	04/03/17	AQ	Groundwater Filtered	MW-107

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EnviroTrac, Ltd **Job No** MC50005

Site: Maggiore Somerville 343 - 351 Summer Street, Somerville, MA **Report Date** 4/10/2017 4 37 10 PM

10 Sample(s) were collected on 03/31/2017 and were received at SGS Accutest New England on 04/03/2017 properly preserved at 2 8 Deg C and intact These Samples received a job number of MC50005 A listing of the Laboratory Sample ID Client Sample ID and dates of collection are presented in the Results Summary Section of this report

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job For more information, please refer to QC summary pages

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ **Batch ID:** OP49583

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- Sample(s) MC50005-1 through MC50005-10 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank
- Continuing calibration check standard MSI3973-CC3952 for Benzo[b]fluoranthene exceed 20% Difference (biased high) Meets MCP technical requirements
- Quadratic regression is employed for initial calibration standard for MSI3952-ICC3952 for Indeno[1,2,3-cd]pyrene, Dibenz[a,h]anthracene
- Only PAHs requested
- MC50005-1 thorugh MC50005-10, OP49583-MB/BS/BSD for Terphenyl-d14, Nitrobenzene-d5 Surrogate standard not added EPH extract analyzed
- MC50005-1,2,3,4,5,6,9 for 2-Fluorobiphenyl Outside in-house control limits, but within MCP control limits

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: AQ **Batch ID:** OP49582

- Only range reported
- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- MC50005-6,8 Confirmation run for surrogate recoveries
- MC50005-6,8 for 1-Chlorooctadecane Outside control limits due to possible matrix interference Confirmed by refractionation/reanalysis
- OP49582-BS/BSD for C9-C18 Aliphatics Recovery of n-nonane was <30% for laboratory control sample

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** N MP99703

- Analysis performed at SGS Accutest, Dayton, NJ

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** N MP99709

- Mercury Analysis performed at SGS Accutest, Dayton, NJ

SGS-Accutest may not have met all requested limits due to methodology limitations, sample matrix, dilutions, or percent solids

SGS Accutest New England certifies that all analysis were performed within method specification It is further recommended that this report to be used in its entirety The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(MC50005)

2

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: SGS Accutest New England **Job No** MC50005

Site: ENVTRAC Maggiore Somerville, 343 - 351 Summer Street, Somer **Report Date** 4/7/2017 10 25 41 AM

On 04/04/2017, 10 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS Accutest at a maximum corrected temperature of 2 9 C. Samples were intact and chemically preserved, unless noted below A SGS Accutest Job Number of MC50005 was assigned to the project Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section

Specified quality control criteria were achieved for this job except as noted below For more information, please refer to the analytical results and QC summary pages

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP99703

- All samples were digested within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- Sample(s) JC40220-4FSDL were used as the QC samples for metals
- RPD(s) for Serial Dilution for Cadmium, Lead, Silver, Vanadium are outside control limits for sample MP99703-SD1 Percent difference acceptable due to low initial sample concentration (< 50 times IDL)

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP99709

- All samples were digested within the recommended method holding time
- All method blanks for this batch meet method specific criteria

SGS Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods Acceptable uncertainty requires tested parameter quality control data to meet method criteria

SGS Accutest is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety Data release is authorized by SGS Accutest indicated via signature on the report cover

Summary of Hits

Job Number: MC50005
Account: EnviroTrac Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 03/31/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC50005-1	**MW-1**					
Naphthalene		0 27 B	0 22		ug/l	SW846 8270D BY SIM
Phenanthrene		0 056 B	0 056		ug/l	SW846 8270D BY SIM
MC50005-1F	**MW-1**					
Arsenic [a]		22 5	3 0		ug/l	SW846 6010C
MC50005-2	**MW-2**					
Benzo(a)anthracene		0 062	0 055		ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0 11	0 11		ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene		0 069	0 055		ug/l	SW846 8270D BY SIM
Fluoranthene		0 11	0 11		ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0 16	0 11		ug/l	SW846 8270D BY SIM
Naphthalene		0 26 B	0 22		ug/l	SW846 8270D BY SIM
Phenanthrene		0 066 B	0 055		ug/l	SW846 8270D BY SIM
MC50005-2F	**MW-2**					
Arsenic [a]		13 4	3 0		ug/l	SW846 6010C
MC50005-3	**MW-3**					
Naphthalene		0 28 B	0 23		ug/l	SW846 8270D BY SIM
MC50005-3F	**MW-3**					
No hits reported in this sample						
MC50005-4	**MW-103**					
Benzo(a)anthracene		0 24	0 056		ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0 25	0 11		ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene		0 27	0 056		ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0 14	0 11		ug/l	SW846 8270D BY SIM
Benzo(k)fluoranthene		0 13	0 11		ug/l	SW846 8270D BY SIM
Chrysene		0 21	0 11		ug/l	SW846 8270D BY SIM
Fluoranthene		0 51	0 11		ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0 27	0 11		ug/l	SW846 8270D BY SIM
Naphthalene		0 46 B	0 22		ug/l	SW846 8270D BY SIM
Phenanthrene		0 30	0 056		ug/l	SW846 8270D BY SIM
Pyrene		0 42	0 11		ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC50005
Account: EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 03/31/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC50005-4F	**MW-103**					
No hits reported in this sample						
MC50005-5	**MW-108**					
Benzo(a)anthracene		0 060	0 054		ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0 11	0 11		ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene		0 055	0 054		ug/l	SW846 8270D BY SIM
Fluoranthene		0 11	0 11		ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0 14	0 11		ug/l	SW846 8270D BY SIM
Phenanthrene		0 072 B	0 054		ug/l	SW846 8270D BY SIM
MC50005-5F	**MW-108**					
No hits reported in this sample						
MC50005-6	**B-2/MW**					
Naphthalene		0 28 B	0 22		ug/l	SW846 8270D BY SIM
MC50005-6F	**B-2/MW**					
Selenium [a]		17 8	10		ug/l	SW846 6010C
Zinc [a]		26 0	20		ug/l	SW846 6010C
MC50005-7	**B-3/MW**					
Naphthalene		0 26 B	0 22		ug/l	SW846 8270D BY SIM
MC50005-7F	**B-3/MW**					
No hits reported in this sample						
MC50005-8	**MW-105**					
Naphthalene		0 23 B	0 22		ug/l	SW846 8270D BY SIM
Phenanthrene		0 073 B	0 055		ug/l	SW846 8270D BY SIM
MC50005-8F	**MW-105**					
Barium [a]		66 9	50		ug/l	SW846 6010C
Lead [a]		3 3	3 0		ug/l	SW846 6010C
Selenium [a]		14 6	10		ug/l	SW846 6010C
Zinc [a]		293	20		ug/l	SW846 6010C

Summary of Hits

Job Number: MC50005
Account: EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 03/31/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC50005-9	**MW-106**					
Naphthalene		0 26 B	0 22		ug/l	SW846 8270D BY SIM
Phenanthrene		0 10 B	0 054		ug/l	SW846 8270D BY SIM
MC50005-9F	**MW-106**					
No hits reported in this sample						
MC50005-10	**MW-107**					
Acenaphthene		0 14	0 11		ug/l	SW846 8270D BY SIM
Acenaphthylene		0 14	0 11		ug/l	SW846 8270D BY SIM
Anthracene		0.36	0 11		ug/l	SW846 8270D BY SIM
Benzo(a)anthracene		0 89	0 055		ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0 88	0 11		ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene		1.5	0 055		ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0 72	0 11		ug/l	SW846 8270D BY SIM
Benzo(k)fluoranthene		0 65	0 11		ug/l	SW846 8270D BY SIM
Chrysene		1.1	0 11		ug/l	SW846 8270D BY SIM
Dibenzo(a,h)anthracene		0 25	0 11		ug/l	SW846 8270D BY SIM
Fluoranthene		2 1	0 11		ug/l	SW846 8270D BY SIM
Fluorene		0.17	0.11		ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		1 0	0 11		ug/l	SW846 8270D BY SIM
Naphthalene		0.31 B	0 22		ug/l	SW846 8270D BY SIM
Phenanthrene		1.2	0 055		ug/l	SW846 8270D BY SIM
Pyrene		1 8	0 11		ug/l	SW846 8270D BY SIM
MC50005-10F	**MW-107**					
Lead [a]		8 5	3 0		ug/l	SW846 6010C
Selenium [a]		11 8	10		ug/l	SW846 6010C

(a) Analysis performed at SGS Accutest, Dayton, NJ

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	MC50005-1	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I104336.D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	ug/l	
91-20-3	Naphthalene	0.27	0.22	ug/l	B
85-01-8	Phenanthrene	0.056	0.056	ug/l	B
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	108% [b]		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added EPH extract analyzed
(b) Outside control limits Meets technical requirements

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	MC50005-1	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE17333.D	1	04/07/17	AP	04/05/17	OP49582	GDE964
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		40-140%
321-60-8	2-Fluorobiphenyl	105%		40-140%
3386-33-2	1-Chlorooctadecane	55%		40-140%
580-13-2	2-Bromonaphthalene	107%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1
Lab Sample ID: MC50005-1F
Matrix: AQ - Groundwater Filtered
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 03/31/17
Date Received: 04/03/17
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6 0	6 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	22 5	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	< 50	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1 0	1 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0 20	0 20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2 0	2 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	< 20	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch N MA41712
(2) Instrument QC Batch N MA41731
(3) Prep QC Batch N MP99703
(4) Prep QC Batch N MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-2
Lab Sample ID: MC50005-2
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 03/31/17
Date Received: 04/03/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I104337 D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1 0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0 11	ug/l	
120-12-7	Anthracene	ND	0 11	ug/l	
56-55-3	Benzo(a)anthracene	0.062	0 055	ug/l	
50-32-8	Benzo(a)pyrene	0.11	0 11	ug/l	
205-99-2	Benzo(b)fluoranthene	0.069	0.055	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0 11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0 11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	0.11	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.16	0 11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	ug/l	
91-20-3	Naphthalene	0 26	0 22	ug/l	B
85-01-8	Phenanthrene	0.066	0 055	ug/l	B
129-00-0	Pyrene	ND	0 11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	110% [b]		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added EPH extract analyzed
(b) Outside control limits Meets technical requirements

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.3

4

Client Sample ID:	MW-2		
Lab Sample ID:	MC50005-2	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE17334.D	1	04/07/17	AP	04/05/17	OP49582	GDE964
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		40-140%
321-60-8	2-Fluorobiphenyl	95%		40-140%
3386-33-2	1-Chlorooctadecane	51%		40-140%
580-13-2	2-Bromonaphthalene	98%		40-140%

ND = Not detected
RL = Reporting Limit
I = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.4

4

Client Sample ID:	MW-2		
Lab Sample ID:	MC50005-2F	**Date Sampled:**	03/31/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/03/17
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6.0	6.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	13.4	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	< 50	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1.0	1.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0.20	0.20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2.0	2.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	< 20	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: N.MA41712
(2) Instrument QC Batch: N.MA41731
(3) Prep QC Batch: N.MP99703
(4) Prep QC Batch: N.MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	MC50005-3	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1104338.D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.057	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.057	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.23	ug/l	
91-20-3	Naphthalene	0.28	0.23	ug/l	B
85-01-8	Phenanthrene	ND	0.057	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	109% [b]		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added EPH extract analyzed
(b) Outside control limits Meets technical requirements

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	MC50005-3	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE17335.D	1	04/07/17	AP	04/05/17	OP49582	GDE964
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	98%		40-140%
321-60-8	2-Fluorobiphenyl	113%		40-140%
3386-33-2	1-Chlorooctadecane	47%		40-140%
580-13-2	2-Bromonaphthalene	117%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.6 4

Client Sample ID:	MW-3		
Lab Sample ID:	MC50005-3I	**Date Sampled:**	03/31/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/03/17
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6.0	6.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	< 50	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1.0	1.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0.20	0.20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2.0	2.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	< 20	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41712
(2) Instrument QC Batch: MA41731
(3) Prep QC Batch: MP99703
(4) Prep QC Batch: MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Report of Analysis

4.7 4

Client Sample ID:	MW-103		
Lab Sample ID:	MC50005-4	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1104339.D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	0.24	0.056	ug/l	
50-32-8	Benzo(a)pyrene	0.25	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	0.27	0.056	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.14	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	0.13	0.11	ug/l	
218-01-9	Chrysene	0.21	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	0.51	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.27	0.11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	ug/l	
91-20-3	Naphthalene	0.46	0.22	ug/l	B
85-01-8	Phenanthrene	0.30	0.056	ug/l	
129-00-0	Pyrene	0.42	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	113% [b]		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added: EPH extract analyzed
(b) Outside control limits. Meets technical requirements

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.7

4

Client Sample ID:	MW-103		
Lab Sample ID:	MC50005-4	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP EPH REV 1 1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE17336 D	1	04/07/17	AP	04/05/17	OP49582	GDE964
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	2 0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	98%		40-140%
321-60-8	2-Fluorobiphenyl	112%		40-140%
3386-33-2	1-Chlorooctadecane	50%		40-140%
580-13-2	2-Bromonaphthalene	116%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.8

4

Client Sample ID:	MW-103		
Lab Sample ID:	MC50005-4F	**Date Sampled:**	03/31/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/03/17
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6.0	6 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	< 3.0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	< 50	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1 0	1 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0.20	0 20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2 0	2 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	< 20	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch N.MA41712
(2) Instrument QC Batch N MA41731
(3) Prep QC Batch N MP99703
(4) Prep QC Batch N MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-108		
Lab Sample ID:	MC50005-5	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I104340.D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	0.060	0.054	ug/l	
50-32-8	Benzo(a)pyrene	0.11	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	0.055	0.054	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	0.11	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.14	0.11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	ug/l	
91-20-3	Naphthalene	ND	0.22	ug/l	
85-01-8	Phenanthrene	0.072	0.054	ug/l	B
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% a		26-121%
321-60-8	2-Fluorobiphenyl	93%		28-107%
1718-51-0	Terphenyl-d14	0% a		29-129%

(a) Surrogate standard not added EPH extract analyzed

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Client Sample ID:	MW-108		
Lab Sample ID:	MC50005-5	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE17337.D	1	04/07/17	AP	04/05/17	OP49582	GDE964
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		40-140%
321-60-8	2-Fluorobiphenyl	104%		40-140%
3386-33-2	1-Chlorooctadecane	46%		40-140%
580-13-2	2-Bromonaphthalene	108%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.10

4

Client Sample ID:	MW-108		
Lab Sample ID:	MC50005-5F	**Date Sampled:**	03/31/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/03/17
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6 0	6 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	< 50	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1 0	1 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0 20	0 20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2 0	2 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	< 20	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch N MA41712
(2) Instrument QC Batch N MA41731
(3) Prep QC Batch N MP99703
(4) Prep QC Batch N MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Report of Analysis

4.11

4

Client Sample ID:	B-2/MW		
Lab Sample ID:	MC50005-6	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1104341 D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1 0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0 11	ug/l	
120-12-7	Anthracene	ND	0 11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0 054	ug/l	
50-32-8	Benzo(a)pyrene	ND	0 11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0 054	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0 11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0 11	ug/l	
218-01-9	Chrysene	ND	0 11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0 11	ug/l	
206-44-0	Fluoranthene	ND	0 11	ug/l	
86-73-7	Fluorene	ND	0 11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0 22	ug/l	
91-20-3	Naphthalene	0 28	0 22	ug/l	B
85-01-8	Phenanthrene	ND	0 054	ug/l	
129-00-0	Pyrene	ND	0 11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	116% [b]		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added EPH extract analyzed
(b) Outside control limits Meets technical requirements

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2 MW		
Lab Sample ID:	MC50005-6	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP LPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DF17338.D	1	04/07/17	AP	04/05/17	OP49582	GDF964
Run #2 [a]	DF17351.D	1	04/10/17	AP	04/05/17	OP49582	GDF965

	Initial Volume	Final Volume
Run #1	930 ml	2.0 ml
Run #2	930 ml	2.0 ml

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%	87%	40-140%
321-60-8	2-Fluorobiphenyl	109%	98%	40-140%
3386-33-2	1-Chlorooctadecane	35% [b]	39% [b]	40-140%
580-13-2	2-Bromonaphthalene	113%	102%	40-140%

(a) Confirmation run for surrogate recoveries
(b) Outside control limits due to possible matrix interference. Confirmed by refractionation/reanalysis

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2/MW		
Lab Sample ID:	MC50005-6F	**Date Sampled:**	03/31/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/03/17
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6.0	6.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	< 50	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1.0	1.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0.20	0.20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	17.8	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2.0	2.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	26.0	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: N MA41712
(2) Instrument QC Batch: N MA41731
(3) Prep QC Batch: N MP99703
(4) Prep QC Batch: N MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Report of Analysis

4.13
4

Client Sample ID:	B-3/MW		
Lab Sample ID:	MC50005-7	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1104342 D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1 0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0 11	ug/l	
208-96-8	Acenaphthylene	ND	0 11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0 056	ug/l	
50-32-8	Benzo(a)pyrene	ND	0 11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0 056	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0 11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0 11	ug/l	
218-01-9	Chrysene	ND	0 11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0 11	ug/l	
206-44-0	Fluoranthene	ND	0 11	ug/l	
86-73-7	Fluorene	ND	0 11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0 22	ug/l	
91-20-3	Naphthalene	0 26	0 22	ug/l	B
85-01-8	Phenanthrene	ND	0 056	ug/l	
129-00-0	Pyrene	ND	0 11	ug/l	

CAS No.	Surrogate Recoverics	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	116% [b]		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added EPH extract analyzed
(b) Outside control limits Meets technical requirements

ND Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.13
4

Client Sample ID:	B-3/MW		
Lab Sample ID:	MC50005-7	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP EPH REV 1 1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE17339 D	1	04/07/17	AP	04/05/17	OP49582	GDE964
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	2 0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	98%		40-140%
321-60-8	2-Fluorobiphenyl	120%		40-140%
3386-33-2	1-Chlorooctadecane	43%		40-140%
580-13-2	2-Bromonaphthalene	122%		40-140%

ND Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3 MW		
Lab Sample ID:	MC50005-7F	**Date Sampled:**	03/31/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/03/17
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6.0	6.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	< 50	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1.0	1.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0.20	0.20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2.0	2.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	< 20	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41712
(2) Instrument QC Batch: MA41731
(3) Prep QC Batch: MP99703
(4) Prep QC Batch: MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-105		
Lab Sample ID:	MC50005-8	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1104343.D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.055	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.055	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	ug/l	
91-20-3	Naphthalene	0.23	0.22	ug/l	B
85-01-8	Phenanthrene	0.073	0.055	ug/l	B
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	103%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-105		
Lab Sample ID:	MC50005-8	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP EPH REV 1 1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE17340 D	1	04/07/17	AP	04/05/17	OP49582	GDE964
Run #2 [a]	DE17352 D	1	04/10/17	AP	04/05/17	OP49582	GDE965

	Initial Volume	Final Volume
Run #1	910 ml	2 0 ml
Run #2	910 ml	2 0 ml

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%	83%	40-140%
321-60-8	2-Fluorobiphenyl	114%	101%	40-140%
3386-33-2	1-Chlorooctadecane	32% [b]	34% [b]	40-140%
580-13-2	2-Bromonaphthalene	118%	103%	40-140%

(a) Confirmation run for surrogate recoveries
(b) Outside control limits due to possible matrix interference Confirmed by refractionation/reanalysis

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-105		
Lab Sample ID:	MC50005-8F	**Date Sampled:**	03/31/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/03/17
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6.0	6 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	< 3.0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	66.9	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1.0	1 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3.0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	3 3	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0 20	0 20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	14 6	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2 0	2 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	293	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch N MA41712
(2) Instrument QC Batch N MA41731
(3) Prep QC Batch N MP99703
(4) Prep QC Batch N MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-106		
Lab Sample ID:	MC50005-9	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1104344.D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	ug/l	
91-20-3	Naphthalene	0.26	0.22	ug/l	B
85-01-8	Phenanthrene	0.10	0.054	ug/l	B
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	118% [b]		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added TPH extract analyzed
(b) Outside control limits Meets technical requirements

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Client Sample ID:	MW-106		
Lab Sample ID:	MC50005-9	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE17341.D	1	04/07/17	AP	04/05/17	OP49582	GDF964
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		40-140%
321-60-8	2-Fluorobiphenyl	106%		40-140%
3386-33-2	1-Chlorooctadecane	40%		40-140%
580-13-2	2-Bromonaphthalene	110%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.18

4

Client Sample ID:	MW-106		
Lab Sample ID:	MC50005-9F	**Date Sampled:**	03/31/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/03/17
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6 0	6 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	< 50	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1 0	1 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	< 3 0	3 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0 20	0 20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2.0	2 0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	< 20	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch N MA41712
(2) Instrument QC Batch N MA41731
(3) Prep QC Batch N MP99703
(4) Prep QC Batch N MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Report of Analysis

4.19

4

Client Sample ID:	MW-107		
Lab Sample ID:	MC50005-10	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Projeet:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Bateh
Run #1	I104345 D	1	04/08/17	DRY	04/05/17	OP49583	MSI3975
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1 0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	0 14	0 11	ug/l	
208-96-8	Acenaphthylene	0 14	0 11	ug/l	
120-12-7	Anthracene	0.36	0 11	ug/l	
56-55-3	Benzo(a)anthracene	0 89	0 055	ug/l	
50-32-8	Benzo(a)pyrene	0.88	0 11	ug/l	
205-99-2	Benzo(b)fluoranthene	1.5	0 055	ug/l	
191-24-2	Benzo(g,h,i)perylene	0 72	0 11	ug/l	
207-08-9	Benzo(k)fluoranthene	0 65	0 11	ug/l	
218-01-9	Chrysene	1 1	0 11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.25	0 11	ug/l	
206-44-0	Fluoranthene	2.1	0 11	ug/l	
86-73-7	Fluorene	0.17	0 11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	0 11	ug/l	
91-57-6	2-Methylnaphthalene	ND	0 22	ug/l	
91-20-3	Naphthalene	0 31	0 22	ug/l	B
85-01-8	Phenanthrene	1 2	0 055	ug/l	
129-00-0	Pyrene	1 8	0 11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	106%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added EPH extract analyzed

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.19 4

Client Sample ID:	MW-107		
Lab Sample ID:	MC50005-10	**Date Sampled:**	03/31/17
Matrix:	AQ - Ground Water	**Date Received:**	04/03/17
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE17343.D	1	04/07/17	AP	04/05/17	OP49582	GDE964
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	110	ug/l	
	C9-C18 Aliphatics	ND	110	ug/l	
	C19-C36 Aliphatics	ND	110	ug/l	
	C11-C22 Aromatics	ND	110	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		40-140%
321-60-8	2-Fluorobiphenyl	104%		40-140%
3386-33-2	1-Chlorooctadecane	41%		40-140%
580-13-2	2-Bromonaphthalene	108%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

4.20 4

Client Sample ID:	MW-107		
Lab Sample ID:	MC50005-10F	**Date Sampled:**	03/31/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/03/17
		Percent Solids:	n/a
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 6.0	6.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Arsenic [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Barium [a]	< 50	50	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Beryllium [a]	< 1.0	1.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Cadmium [a]	< 3.0	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Chromium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Lead [a]	8.5	3.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Mercury [a]	< 0.20	0.20	ug/l	1	04/05/17	04/05/17	ANJ	SW846 7470A [1]	SW846 7470A [4]
Nickel [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Selenium [a]	11.8	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Silver [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Thallium [a]	< 2.0	2.0	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Vanadium [a]	< 10	10	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]
Zinc [a]	< 20	20	ug/l	1	04/05/17	04/06/17	ANJ	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41712
(2) Instrument QC Batch: MA41731
(3) Prep QC Batch: MP99703
(4) Prep QC Batch: MP99709

(a) Analysis performed at SGS Accutest, Dayton, NJ

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- MCP Form (SGS Accutest New Jersey)
- EPH Form
- Sample Tracking Chronicle
- QC Evaluation MA MCP Limits

SGS ACCUTEST

CHAIN OF CUSTODY (JB)

SGS Accutest of New England
50 D'Angelo Drive, Building One Marlborough, MA 01752
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

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MC50005

Client / Reporting Information

Company Name: EnviroTrac Ltd.
Street Address: 2 Merchant St. Suite #2
City, State, Zip: Sharon MA 02067
Project Contact: J. Buttaro
E-mail: jennferb@envirotrac.com
Phone #: 781-793-0074
Fax #:
Sampler(s) Name(s): L. Main, H. Havel
Phone #:

Project Information

Project Name: Maggiore Somerville
Street: 345-351 Somerville St.
City: Somerville, MA
Project #: 03.490202.00
Client PO#:
Project Manager: Jenn Buttaro
Attention:
PO#:

Billing Information (If different from Report to)

Company Name:
Street Address:
City, State, Zip:

Requested Analysis (see TEST CODE sheet)

EPH w/ target PAHs
14 MCP Metals (field filtered)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

#	Field ID / Point of Collection	MEOH Vial #	Date	Time	Sampled By	Matrix	# of bottles	HCl	MeOH	HNO3	H2SO4	DI Water	NaOH	ENCORE	Sodium Bisulfate	LAB USE ONLY
1	MW-1		3/31/17	11:16	LM/HH	GW	3	2		1						
2	MW-2			10:14												
3	MW-3			8:34												
4	MW-103			9:21												
5	MW-108			12:23												
6	B-2/MW			10:31												
7	B-3/MW			11:33												
8	MW-105			12:19												17C
9	MW-106			9:37												
10	MW-107			8:45												

Turnaround Time (Business days)
- [ ] Std. 10 Business Days
- [x] Std. 5 Business Days (By Contract only)
- [ ] 8 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:
5-7 days (ET contract rate)

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULL T1 (Level 3+4)
- [ ] CT RCP
- [x] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- Commercial "A" = Results Only
- Commercial "B" = Results + QC Summary

Comments / Special Instructions
Must meet GW-1 detection limits

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		3/31/17 15:00	ET secure fridge	Emily Hamil	4/3/17 11:45	
2						
3		4/3/17 13:50				
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp.
				Not intact		3.3°C 2.4°C

MC 50005: Chain of Custody
Page 1 of 2

SGS Accutest NE Sample Receipt Summary

Job Number MC50005 Client ENVIROTRAC Project MAGGIORE SOMERVILLE

Date / Time Received 4/3/2017 1:56:00 PM Delivery Method SGS Courier Airbill #'s

Cooler Temps (Initial/Adjusted) #1(3.3/2.8); #2(2.1/1.6);

Cooler Security	Y or N		Y or N
1 Custody Seals Present	✓	3 COC Present	✓
2 Custody Seals Intact	✓	4 Smpl Dates/Time OK	✓

Cooler Temperature	Y or N
1 Temp criteria achieved	✓
2 Thermometer ID	IR GUN1
3 Cooler media	Ice (Bag)
4 No Coolers	2

Quality Control Preservation	Y or N	N/A
1 Trip Blank present / cooler		✓
2 Trip Blank listed on COC		✓
3 Samples preserved properly	✓	
4 VOC s headspace free		✓

Sample Integrity - Documentation	Y or N
1 Sample labels present on bottles	✓
2 Container labeling complete	✓
3 Sample container label COC agree	✓

Sample Integrity - Condition	Y or N
1 Sample recvd within HT	✓
2 All containers accounted for	✓
3 Condition of sample	Intact

Sample Integrity - Instructions	Y or N	N/A
1 Analysis requested is clear	✓	
2 Bottles received for unspecified tests		✓
3 Sufficient volume recvd for analysis	✓	
4 Compositing instructions clear		✓
5 Filtering instructions clear		✓

Comments

MC 50005: Chain of Custody
Page 2 of 2

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	WSC-CAM	Exhibit VII A
	July 1, 2010	Revision No. 1
	Final	

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name	SGS Accutest Marlborough	Project #	MC50005
Project Location	Maggiore Somerville, 343 351 Summer Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set list Laboratory Sample ID Numbers(s)
MC50005-1 through MC50005-10
MC50005-1F, through MC50005-10F

Matrices Groundwater/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below)

8260 VOC ( ) CAM IIA	7470/7471 Hg (X) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC (X) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH (X) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only a VPH, EPH, and APH Methods only Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications) b APH and TO-15 Methods only Was the complete analyte list reported for each method?	☑ Yes ☑ Yes	☐ No ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☐ Yes	☑ No
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.		
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No *
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No *

* *All Negative responses must be addressed in an attached Environmental Laboratory case narrative.*

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 10-Apr-17

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	WSC-CAM	Exhibit VII A
	July 1, 2010	Revision No. 1
	Final	

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name:	Accutest Mid-Atlantic	Project #	MC50005
Project Location #01074,	ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC50005-10F,MC50005-1F,MC50005-2F,MC50005-3F,MC50005-4F,MC50005-5F,MC50005-6F
MC50005-7F,MC50005-8F,MC50005-9F

Matrices: Groundwater/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below)

8260 VOC ( ) CAM IIA	7470/7471 Hg (X) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH ( ) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only: a VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ Yes	☐ No ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☑ Yes	☐ No [1]
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.		
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No [1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes	☐ No [1]

All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Nancy F. Cole Position: Laboratory Director

Printed Name: Nancy F. Cole Date: 07-Apr-17

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐	
Containers	Satisfactory ☑	Broken ☐	Leaking ☐		
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐		
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.8 Deg. C	
Extraction Method	SW846 3510C				

Method for Ranges:	MADEP EPH REV 1.1	**Client ID:** MW-1		**Lab ID:**	MC50005-1
Method for Targets:	MADEP EPH REV 1.1	**Date Collected:** 3/31/2017		**Date Received:**	4/3/2017
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl	**Date Extracted:** 4/5/2017 2:30:00 PM	**First Date Run:** 4/7/2017	**Last Date Run:**	N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl 2-Bromonaphthalene	**% Solids:** N/A	**Low Dilution:** 1	**High Dilution:**	N/A

Unadjusted Ranges	**CAS #**	**Units**	**Result**	**RDL**	**Q**
C11-C22 Aromatics (Unadj.)		ug/l	ND [A]	110	

Adjusted Ranges			
C9-C18 Aliphatics	ug/l	ND [A]	110
C19-C36 Aliphatics	ug/l	ND [A]	110
C11-C22 Aromatics	ug/l	ND [B]	110

Surrogate Recoveries			**Acceptance Range**
1-Chlorooctadecane	%	55	40-140 %
o-Terphenyl	%	87	40-140 %
2-Fluorobiphenyl	%	105	40-140 %
2-Bromonaphthalene	%	107	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] **Postition** Laboratory Director

Printed Name H. (Brad) Madadian **Date** 4/10/2017

MADEP EPH FORM

Matrix	Aqueous ✓	Soil	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A	pH <= 2 ✓	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 2 8 Deg. C	
Extraction Method	SW846 3510C				

Method for Ranges	MADEP EPH REV 1 1	Client ID	MW-2	Lab ID	MC50005-2
Method for Targets	MADEP EPH REV 1 1	Date Collected	3/31/2017	Date Received	4/3/2017
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted	First Date Run		Last Date Run
	Aromatic o-Terphenyl	4/5/2017 2 30 00 PM	4/7/2017		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids	Low Dilution		High Dilution
Surrogate Standards	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	110	

Adjusted Ranges				
C9-C18 Aliphatics	ug/l	ND A	110	
C19-C36 Aliphatics	ug/l	ND A	110	
C11-C22 Aromatics	ug/l	ND B	110	
Surrogate Recoveries			**Accaptanca Range**	
1-Chlorooctadecane	%	51	40-140 %	
o-Terphenyl	%	85	40-140 %	
2-Fluorobiphenyl	%	95	40-140 %	
2-Bromonaphthalene	%	98	40-140 %	

Footnotes

A Hydrocarbon Renge date exclude concentrations of any surrogate(s) and/or internal standards eluting in that renge

a Hydrocarbon Renge date exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbone exclude the concentretion of Target PAH Anelytes

J A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ✓ Yas No- Details Attatched

Were all performence/ecceptence stenderds for required QA/QC procedures echievad? ✓ Yes No- Detaila Attatched

Were eny signifIcent modificetions made to the EPH method, as specified in Sect. 11.3? ✓ No Yes- Details Attatched

I ettest under the pains end penalties of perjury that, based upon my inquiry of those individuels immedialaly raaponalble for obtainig the infonnetion, the meterial contained in this report is, to tha bast of my knowledge and bellaf, accurata end completa.

Signature

Printed Name H. (Brad) Madadian

Postition Laboratory Director

Date 4/10/2017

MADEP EPH FORM

Matrix	Aqueous ✓	Soil	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A	pH <= 2 ✓	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 2 8 Deg. C	
Extraction Method	SW846 3510C				

Method for Ranges	MADEP EPH REV 1 1	Client ID	MW-3	Lab ID	MC50005-3
Method for Targets	MADEP EPH REV 1 1	Date Collected	3/31/2017	Date Received	4/3/2017
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted	First Date Run		Last Date Run
	Aromatic o-Terphenyl	4/5/2017 2 30:00 PM	4/7/2017		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids	Low Dilution		High Dilution
Surrogate Standards	2-Bromonaphthalene	N/A	1		N/A

Unadjustad Ranges	CAS #	Units	Rasult	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	110	

Adjusted Ranges				
C9-C18 Aliphatics	ug/l	ND A	110	
C19-C36 Aliphatics	ug/l	ND A	110	
C11-C22 Aromatics	ug/l	ND B	110	
Surrogate Recoveries			**Accaptanca Ranga**	
1-Chlorooctadecane	%	47	40-140 %	
o-Terphenyl	%	98	40-140 %	
2-Fluorobiphenyl	%	113	40-140 %	
2-Bromonaphthalene	%	117	40-140 %	

Footnotes

A Hydrocarbon Renge data exclude concentrations of any surrogate(s) and/or internal standards eluting in that renge

B Hydrocarbon Renge data exclude concentrations of any surrogate(s) and/or internal standards eluting in that renge C11-C22 Aromatic Hydrocarbone exclude the concentretion of Target PAH Anelytes

J A 'J' qualifier indicates an estimated value

Ware all QA/QC procedures REQUIRED by the EPH Method followed? ✓ Yes No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ✓ Yaa No- Details Attatched

Were any algnificant modifications made to the EPH method, aa apecified in Sect. 11.3? ✓ No Yas- Details Attatched

I attast under the pains and penalties of perjury that, based upon my inquiry of thosa individuals immedialaly rasponsibla for obtainig the information, the material contained in this report is, to the best of my knowledge and bellaf, accurata and completa

Signature

Printed Name H. (Brad) Madadian

Postition Laboratory Director

Date 4/10/2017

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.8 Deg. C			
Extraction Method	SW846 3510C						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: MW-103		Lab ID: MC50005-4	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 3/31/2017		Date Received: 4/3/2017	
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	4/5/2017 2:30:00 PM	4/7/2017		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
Surrogate Standards	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND [A]	110	

Adjusted Ranges				
C9-C18 Aliphatics		ug/l	ND [A]	110
C19-C36 Aliphatics		ug/l	ND [A]	110
C11-C22 Aromatics		ug/l	ND [B]	110
Surrogate Recoveries				**Acceptance Range**
1-Chlorooctadecane		%	50	40-140 %
o-Terphenyl		%	98	40-140 %
2-Fluorobiphenyl		%	112	40-140 %
2-Bromonaphthalene		%	116	40-140 %

Footnotes

A Hydrocarbon Ranga data exclude concentratione of any surrogate(e) and/or internal standarde eluting in that renge

B Hydrocarbon Ranga data exclude concentrations of any surrogate(e) and/or internal standarde eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Anelytes

Z A 'J' qualifiar indicates an aetimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this reoort is. to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 4/10/2017

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.8 Deg. C			
Extraction Method	SW846 3510C						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: MW-108		Lab ID: MC50005-5	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 3/31/2017		Date Received: 4/3/2017	
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	4/5/2017 2:30:00 PM	4/7/2017		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
Surrogate Standards.	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND [A]	110	

Adjusted Ranges				
C9-C18 Aliphatics		ug/l	ND [A]	110
C19-C36 Aliphatics		ug/l	ND [A]	110
C11-C22 Aromatics		ug/l	ND [B]	110
Surrogate Recoveries				**Acceptance Range**
1-Chlorooctadecane		%	46	40-140 %
o-Terphenyl		%	88	40-140 %
2-Fluorobiphenyl		%	104	40-140 %
2-Bromonaphthalene		%	108	40-140 %

Footnotes

A Hydrocarbon Ranga data exclude concentrations of any surrogate(s) and/or internal standarda eluting in that ranga

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this reoort is. to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 4/10/2017

MADEP EPH FORM

Matrix	Aqueous ✓	Soil	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A	pH <= 2 ✓	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 2 8 Deg C	
Extraction Method	SW846 3510C				

Method for Ranges	MADEP EPH REV 1 1	Client ID: B-2/MW		Lab ID:	MC50005-6
Method for Targets	MADEP EPH REV 1 1	Data Collected: 3/31/2017		Data Received:	4/3/2017
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	4/5/2017 2:30:00 PM	4/7/2017		04/10/17
EPH Fractionation	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
Surrogate Standards	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	110	

Adjusted Ranges				
C9-C18 Aliphatics		ug/l	ND A	110
C19-C36 Aliphatics		ug/l	ND A	110
C11-C22 Aromatics		ug/l	ND B	110
Surrogate Recoveries				**Acceptance Range**
1-Chlorooctadecane		%	39	40-140 %
1-Chlorooctadecane		%	35	40-140 %
o-Terphenyl		%	87	40-140 %
o-Terphenyl		%	95	40-140 %
2-Fluorobiphenyl		%	98	40-140 %
2-Fluorobiphenyl		%	109	40-140 %
2-Bromonaphthalene		%	102	40-140 %
2-Bromonaphthalene		%	113	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

C Outside control limits due to possible matrix interference. Confirmed by reextraction/reanalysis

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ✓ Yes ☐ No- Details Attached

Were all performance/acceptance standards for required QA/QC procedures achieved? ☐ Yes ✓ No- Details Attached

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ✓ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 4/10/2017

MADEP EPH FORM

Matrix	Aqueous ✓	Soil	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A	pH <= 2 ✓	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 2 8 Deg C	
Extraction Method	SW846 3510C				

Method for Ranges	MADEP EPH REV 1 1	Client ID: B-3/MW		Lab ID	MC50005-7
Method for Targets	MADEP EPH REV 1 1	Data Collected: 3/31/2017		Data Received	4/3/2017
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted	First Date Run:		Last Data Run
	Aromatic o-Terphenyl	4/5/2017 2:30:00 PM	4/7/2017		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids	Low Dilution:		High Dilution
Surrogate Standards	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND A	110	

Adjusted Ranges				
C9-C18 Aliphatics		ug/l	ND A	110
C19-C36 Aliphatics		ug/l	ND A	110
C11-C22 Aromatics		ug/l	ND B	110
Surrogate Recoveries				**Acceptance Range**
1-Chlorooctadecane		%	43	40-140 %
o-Terphenyl		%	98	40-140 %
2-Fluorobiphenyl		%	120	40-140 %
2-Bromonaphthalene		%	122	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ✓ Yes ☐ No- Details Attached

Were all performance/acceptance standards for required QA/QC procedures achieved? ✓ Yes ☐ No- Details Attached

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ✓ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 4/10/2017

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.8 Deg. C			
Extraction Method	SW846 3510C						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: MW-105		Lab ID: MC50005-8	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 3/31/2017		Date Received: 4/3/2017	
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic: o-Terphenyl	4/5/2017 2:30:00 PM	4/7/2017		04/10/17
EPH Fractionation	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
Surrogate Standards.	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND [A]	110	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND [A]	110	
C19-C36 Aliphatics		ug/l	ND [A]	110	
C11-C22 Aromatics		ug/l	ND [B]	110	
Surrogate Recoveries				Acceptance Range	
1-Chlorooctadecane		%	34 [C]	40-140 %	
1-Chlorooctadecane		%	32 [C]	40-140 %	
o-Terphenyl		%	83	40-140 %	
o-Terphenyl		%	94	40-140 %	
2-Fluorobiphenyl		%	101	40-140 %	
2-Fluorobiphenyl		%	114	40-140 %	
2-Bromonaphthalene		%	103	40-140 %	
2-Bromonaphthalene		%	118	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

C Outside control limits due to possible matrix interference. Confirmed by refractionation/reanalysis

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☐ Yes ☑ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: H. Madadian Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 4/10/2017

MADEP EPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.8 Deg. C			
Extraction Method	SW846 3510C						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: MW-106		Lab ID: MC50005-9	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 3/31/2017		Date Received: 4/3/2017	
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic: o-Terphenyl	4/5/2017 2:30:00 PM	4/7/2017		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
Surrogate Standards.	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/l	ND [A]	110	
Adjusted Ranges					
C9-C18 Aliphatics		ug/l	ND [A]	110	
C19-C36 Aliphatics		ug/l	ND [A]	110	
C11-C22 Aromatics		ug/l	ND [B]	110	
Surrogate Recoveries				Acceptance Range	
1-Chlorooctadecane		%	40	40-140 %	
o-Terphenyl		%	88	40-140 %	
2-Fluorobiphenyl		%	106	40-140 %	
2-Bromonaphthalene		%	110	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: H. Madadian Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 4/10/2017

MADEP EPH FORM

Matrix	Aqueous ✓	Soil	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A	pH <= 2 ✓	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 2 8 Deg C	
Extraction Method	SW846 3510C				

Method for Ranges	MADEP EPH REV 1 1	Client ID	MW-107	Lab ID	MC50005-10
Method for Targets	MADEP EPH REV 1 1	Date Collected	3/31/2017	Date Received	4/3/2017
EPH Surrogate Stds	Aliphatic 1-Chlorooctadecane	Date Extracted	First Date Run		Last Date Run
	Aromatic o-Terphenyl	4/5/2017 2 30 00 PM	4/7/2017		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids	Low Dilution		High Dilution
Surrogate Standards	2-Bromonaphthalene	N/A	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj)		ug/l	ND A	110	

Adjusted Ranges				
C9-C18 Aliphatics	ug/l	ND A	110	
C19-C36 Aliphatics	ug/l	ND A	110	
C11-C22 Aromatics	ug/l	ND B	110	
Surrogate Recoveries			**Acceptance Range**	
1-Chlorooctadecane	%	41	40-140 %	
o-Terphenyl	%	86	40-140 %	
2-Fluorobiphenyl	%	104	40-140 %	
2-Bromonaphthalene	%	108	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

J A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ✓ Yes No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ✓ Yes No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ✓ No Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 4/10/2017

Internal Sample Tracking Chronicle

EnvtroTrac, Ltd

Job No: MC50005

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No. 03 990202 00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50005-1 Collected 31-MAR-17 11 16 By LMHH Received 03-APR-17 By TF MW-1						
MC50005-1	MADEP EPH REV 1 1	07-APR-17 17 48	AP	05-APR-17	AJ	BMAEPHR
MC50005-1	SW846 8270D BY SIM	08-APR-17 10 34	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-2 Collected 31-MAR-17 10 14 By LMHH Received 03-APR-17 By TF MW-2						
MC50005-2	MADEP EPH REV 1 1	07-APR-17 18 16	AP	05-APR-17	AJ	BMAEPHR
MC50005-2	SW846 8270D BY SIM	08-APR-17 11 00	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-3 Collected 31-MAR-17 08 34 By LMHH Received 03-APR-17 By TF MW-3						
MC50005-3	MADEP EPH REV 1 1	07-APR-17 18 43	AP	05-APR-17	AJ	BMAEPHR
MC50005-3	SW846 8270D BY SIM	08-APR-17 11 27	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-4 Collected 31-MAR-17 09 21 By LMHH Received 03-APR-17 By TF MW-103						
MC50005-4	MADEP EPH REV 1 1	07-APR-17 19 11	AP	05-APR-17	AJ	BMAEPHR
MC50005-4	SW846 8270D BY SIM	08-APR-17 11 53	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-5 Collected 31-MAR-17 12 23 By LMHH Received 03-APR-17 By TF MW-108						
MC50005-5	MADEP EPH REV 1 1	07-APR-17 19 39	AP	05-APR-17	AJ	BMAEPHR
MC50005-5	SW846 8270D BY SIM	08-APR-17 12 20	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-6 Collected 31-MAR-17 10 31 By LMHH Received 03-APR-17 By TF B-2/MW						
MC50005-6	MADEP EPH REV 1 1	07-APR-17 20 07	AP	05-APR-17	AJ	BMAEPHR
MC50005-6	SW846 8270D BY SIM	08-APR-17 12 46	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-6	MADEP EPH REV 1 1	10-APR-17 08 52	AP	05-APR-17	AJ	BMAEPHR
MC50005-7 Collected 31-MAR-17 11 33 By LMHH Received 03-APR-17 By TF B-3/MW						

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Job No: MC50005

5.5

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Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50005-7	MADEP EPH REV 1.1	07-APR-17 20:35	AP	05-APR-17	AJ	BMAEPHR
MC50005-7	SW846 8270D BY SIM	08-APR-17 13:12	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-8 Collected: 31-MAR-17 12:19 By: LMHH Received: 03-APR-17 By: TF MW-105						
MC50005-8	MADEP EPH REV 1.1	07-APR-17 21:03	AP	05-APR-17	AJ	BMAEPHR
MC50005-8	SW846 8270D BY SIM	08-APR-17 13:39	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-8	MADEP EPH REV 1.1	10-APR-17 09:20	AP	05-APR-17	AJ	BMAEPHR
MC50005-9 Collected: 31-MAR-17 09:37 By: LMHH Received: 03-APR-17 By: TF MW-106						
MC50005-9	MADEP EPH REV 1.1	07-APR-17 21:31	AP	05-APR-17	AJ	BMAEPHR
MC50005-9	SW846 8270D BY SIM	08-APR-17 14:05	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-10 Collected: 31-MAR-17 08:45 By: LMHH Received: 03-APR-17 By: TF MW-107						
MC50005-10	MADEP EPH REV 1.1	07-APR-17 22:27	AP	05-APR-17	AJ	BMAEPHR
MC50005-10	SW846 8270D BY SIM	08-APR-17 14:31	DRY	05-APR-17	AJ	B8270SIMPAH
MC50005-11 Collected: 31-MAR-17 11:16 By: LMHH Received: 03-APR-17 By: TF MW-1						
MC50005-11	SW846 7470A	05-APR-17 13:46	ANJ	05-APR-17	ANJ	HG
MC50005-11	SW846 6010C	06-APR-17 18:55	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-2 Collected: 31-MAR-17 10:14 By: LMHH Received: 03-APR-17 By: TF MW-2						
MC50005-2	SW846 7470A	05-APR-17 13:48	ANJ	05-APR-17	ANJ	HG
MC50005-2	SW846 6010C	06-APR-17 18:58	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-3 Collected: 31-MAR-17 08:34 By: LMHH Received: 03-APR-17 By: TF MW-3						
MC50005-3	SW846 7470A	05-APR-17 13:49	ANJ	05-APR-17	ANJ	HG

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Job No: MC50005

5.5

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Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50005-3	SW846 6010C	06-APR-17 19:01	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-4 Collected: 31-MAR-17 09:21 By: LMHH Received: 03-APR-17 By: TF MW-103						
MC50005-4	SW846 7470A	05-APR-17 13:50	ANJ	05-APR-17	ANJ	HG
MC50005-4	SW846 6010C	06-APR-17 19:04	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-5 Collected: 31-MAR-17 12:23 By: LMHH Received: 03-APR-17 By: TF MW-108						
MC50005-5	SW846 7470A	05-APR-17 13:55	ANJ	05-APR-17	ANJ	HG
MC50005-5	SW846 6010C	06-APR-17 19:12	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-6 Collected: 31-MAR-17 10:31 By: LMHH Received: 03-APR-17 By: TF B-2/MW						
MC50005-6	SW846 7470A	05-APR-17 13:56	ANJ	05-APR-17	ANJ	HG
MC50005-6	SW846 6010C	06-APR-17 19:15	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-7 Collected: 31-MAR-17 11:33 By: LMHH Received: 03-APR-17 By: TF B-3/MW						
MC50005-7	SW846 7470A	05-APR-17 13:57	ANJ	05-APR-17	ANJ	HG
MC50005-7	SW846 6010C	06-APR-17 19:18	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-8 Collected: 31-MAR-17 12:19 By: LMHH Received: 03-APR-17 By: TF MW-105						
MC50005-8	SW846 7470A	05-APR-17 13:58	ANJ	05-APR-17	ANJ	HG
MC50005-8	SW846 6010C	06-APR-17 19:20	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN

Internal Sample Tracking Chronicle

EnviroTrac, Ltd

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No 03 990202 00

Job No: MC50005

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50005-9	Collected 31-MAR-17 09 37 By LMHH Received 03-APR-17 By TF					
MW-106						
MC50005-9	SW846 7470A	05-APR-17 14 00	ANJ	05-APR-17	ANJ	HG
MC50005-9	SW846 6010C	06-APR-17 19 23	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-10	Collected 31-MAR-17 08 45 By LMHH Received 03-APR-17 By TF					
MW-107						
MC50005-10	SW846 7470A	05-APR-17 14 01	ANJ	05-APR-17	ANJ	HG
MC50005-10	SW846 6010C	06-APR-17 19 26	ANJ	05-APR-17	ANJ	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN

QC Evaluation: MA MCP Limits

Job Number: MC50005
Account: EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 03/31/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Limits	Limits

No Exceptions found

* Sample used for QC is not from job MC50005

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC50005
Account: ENVTRAC EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49583-MB	1104309 D	1	04/06/17	DRY	04/05/17	OP49583	MSI3973

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC50005-1, MC50005-2, MC50005-3, MC50005-4, MC50005-5, MC50005-6, MC50005-7, MC50005-8, MC50005-9, MC50005-10

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0 10	ug/l	
208-96-8	Acenaphthylene	ND	0 10	ug/l	
120-12-7	Anthracene	ND	0 10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0 050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0 10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0 050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0 10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0 10	ug/l	
218-01-9	Chrysene	ND	0 10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0 10	ug/l	
206-44-0	Fluoranthene	ND	0 10	ug/l	
86-73-7	Fluorene	ND	0 10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0 10	ug/l	
91-57-6	2-Methylnaphthalene	ND	0 20	ug/l	
91-20-3	Naphthalene	0 18	0 20	ug/l	J
85-01-8	Phenanthrene	0 027	0 050	ug/l	J
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	0%* [a]	26-121%
321-60-8	2-Fluorobiphenyl	92%	28-107%
1718-51-0	Terphenyl-d14	0%* [a]	29-129%

(a) Surrogate standard not added EPH extract analyzed

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC50005
Account: ENVTRAC EnviroTrac Ltd
Project: Maggiore Somerville 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49583-BS	I104307.D	1	04/06/17	DRY	04/05/17	OP49583	MSI3973
OP49583-BSD	I104308.D	1	04/06/17	DRY	04/05/17	OP49583	MSI3973

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC50005-1, MC50005-2, MC50005-3, MC50005-4, MC50005-5, MC50005-6, MC50005-7, MC50005-8, MC50005-9, MC50005-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	50	41.5	83	43.3	87	4	45-116/30
208-96-8	Acenaphthylene	50	44.1	88	46.8	94	6	34-110/30
120-12-7	Anthracene	50	40.9	82	40.8	82	0	50-117/30
56-55-3	Benzo(a)anthracene	50	42.8	86	42.5	85	1	55-139/30
50-32-8	Benzo(a)pyrene	50	42.6	85	43.1	86	1	48-131/30
205-99-2	Benzo(b)fluoranthene	50	47.3	95	45.9	92	3	49-141/30
191-24-2	Benzo(g,h,i)perylene	50	47.5	95	48.6	97	2	60-130/30
207-08-9	Benzo(k)fluoranthene	50	45.0	90	46.3	93	3	49-133/30
218-01-9	Chrysene	50	43.1	86	44.2	88	3	52-128/30
53-70-3	Dibenzo(a,h)anthracene	50	45.2	90	46.4	93	3	60-136/30
206-44-0	Fluoranthene	50	41.5	83	40.4	81	3	46-132/30
86-73-7	Fluorene	50	45.3	91	46.1	92	2	53-120/30
193-39-5	Indeno(1,2,3-cd)pyrene	50	46.7	93	46.8	94	0	57-134/30
91-57-6	2-Methylnaphthalene	50	32.2	64	34.7	69	7	36-111/30
91-20-3	Naphthalene	50	29.5	59	32.4	65	9	32-116/30
85-01-8	Phenanthrene	50	39.0	78	39.8	80	2	50-120/30
129-00-0	Pyrene	50	40.1	80	39.1	78	3	48-127/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	0%* [a]	0%* [a]	26-121%
321-60-8	2-Fluorobiphenyl	99%	99%	28-107%
1718-51-0	Terphenyl-d14	0%* [a]	0%* [a]	29-129%

(a) Surrogate standard not added. EPH extract analyzed

* = Outside of Control Limits

Semivolatile Internal Standard Area Summary

Job Number: MC50005
Account: ENVTRAC EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Check Std: MSI3973-CC3952 **Injection Date:** 04/06/17
Lab File ID: I104297.D **Injection Time:** 09:36
Instrument ID: GCMSI **Method:** SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	17438	4.21	50688	5.25	38844	6.77	42543	8.08	32524	11.14	52272	14.42
Upper Limit [a]	34876	4.71	101376	5.75	77688	7.27	85086	8.58	65048	11.64	104544	14.92
Lower Limit [b]	8719	3.71	25344	4.75	19422	6.27	21272	7.58	16262	10.64	26136	13.92
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
ZZZZZZ	14136	4.21	40957	5.25	29148	6.78	32693	8.08	22169	11.13	36075	14.42
ZZZZZZ	13074	4.21	39266	5.26	33310	6.78	38061	8.08	25643	11.14	45106	14.42
OP49583-BS	14362	4.20	44940	5.25	32688	6.78	40874	8.08	33300	11.14	58915	14.42
OP49583-BSD	15508	4.20	47881	5.25	34868	6.78	43379	8.08	35375	11.13	61724	14.42
OP49583-MB	13380	4.20	41423	5.25	29835	6.78	38000	8.08	29711	11.14	52238	14.42
ZZZZZZ	11634	4.20	36545	5.26	26847	6.77	34230	8.08	26748	11.14	46740	14.42
ZZZZZZ	14063	4.20	43916	5.25	31385	6.78	40310	8.08	31363	11.14	54759	14.42
ZZZZZZ	11842	4.20	37471	5.25	27081	6.78	35427	8.08	27818	11.14	49541	14.42

IS 1 1,4-Dichlorobenzene-d4
IS 2 Naphthalene-d8
IS 3 Acenaphthene-D10
IS 4 Phenanthrene-d10
IS 5 Chrysene-d12
IS 6 Perylene-d12

(a) Upper Limit = + 100% of check standard area, Retention time + 0.5 minutes
(b) Lower Limit = -50% of check standard area, Retention time -0.5 minutes

Semivolatile Internal Standard Area Summary

Job Number: MC50005
Account: ENVTRAC EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Check Std:	MSI3975-CC3952	**Injection Date:**	04/08/17
Lab File ID:	I104334 D	**Injection Time:**	09 22
Instrument ID:	GCMSI	**Method:**	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	17882	4 21	52459	5 26	39606	6 77	43750	8 08	33298	11 14	54834	14 42
Upper Limit [a]	35764	4 71	104918	5 76	79212	7 27	87500	8 58	66596	11 64	109668	14 92
Lower Limit [b]	8941	3 71	26230	4 76	19803	6 27	21875	7 58	16649	10.64	27417	13 92
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
ZZZZZZ	11802	4 20	36848	5 25	26111	6 78	31893	8 08	25013	11 14	44951	14 43
MC50005-1	13245	4 20	39767	5 25	28315	6 78	35783	8 08	26954	11 14	46881	14 43
MC50005-2	11906	4 20	37057	5 25	26093	6 78	32773	8 08	24893	11 14	42940	14 43
MC50005-3	12277	4 20	36944	5 26	26346	6 78	33200	8 08	25419	11 14	43009	14 43
MC50005-4	12867	4 20	38772	5 25	27253	6 77	33884	8 08	25980	11 14	44016	14 42
MC50005-5	14383	4 20	44409	5 25	31256	6 77	38753	8 08	29652	11 14	50415	14 42
MC50005-6	12331	4 20	37316	5 25	26261	6.78	32796	8 08	24786	11 14	41324	14 43
MC50005-7	14046	4 20	42497	5 25	29794	6.78	37622	8 08	28680	11 14	47852	14 42
MC50005-8	16621	4 20	50746	5 25	34897	6.77	44529	8 08	33685	11 14	55845	14 42
MC50005-9	12711	4 20	38232	5 25	27145	6 78	34265	8.08	26359	11 14	43746	14 43
MC50005-10	14068	4 20	43534	5 25	30464	6 77	38742	8 08	29708	11 14	49500	14 42

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area, Retention time + 0 5 minutes
(b) Lower Limit = -50% of check standard area, Retention time -0 5 minutes

6.3.2.6

Semivolatile Surrogate Recovery Summary

Job Number: MC50005
Account: ENVTRAC EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: SW846 8270D BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC50005-1	I104336 D	0* [a]	108* [b]	0* [a]
MC50005-2	I104337 D	0* [a]	110* [b]	0* [a]
MC50005-3	I104338 D	0* [a]	109* [b]	0* [a]
MC50005-4	I104339 D	0* [a]	113* [b]	0* [a]
MC50005-5	I104340 D	0* [a]	93	0* [a]
MC50005-6	I104341 D	0* [a]	116* [b]	0* [a]
MC50005-7	I104342 D	0* [a]	116* [b]	0* [a]
MC50005-8	I104343 D	0* [a]	103	0* [a]
MC50005-9	I104344 D	0* [a]	118* [b]	0* [a]
MC50005-10	I104345 D	0* [a]	106	0* [a]
OP49583-BS	I104307 D	0* [a]	99	0* [a]
OP49583-BSD	I104308 D	0* [a]	99	0* [a]
OP49583-MB	I104309 D	0* [a]	92	0* [a]

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	26-121%
S2 = 2-Fluorobiphenyl	28-107%
S3 = Terphenyl-d14	29-129%

(a) Surrogate standard not added EPH extract analyzed
(b) Outside control limits. Meets technical requirements

6.4.1.6

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC50005
Account: ENVTRAC Envirotrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49582-MB	DE17321.D	1	04/06/17	AP	04/05/17	OP49582	GDI963

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC50005-1, MC50005-2, MC50005-3, MC50005-4, MC50005-5, MC50005-6, MC50005-7, MC50005-8, MC50005-9, MC50005-10

CAS No.	Compound	Result	RL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	100	ug/l	
	C9-C18 Aliphatics	ND	100	ug/l	
	C19-C36 Aliphatics	ND	100	ug/l	
	C11-C22 Aromatics	ND	100	ug/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	104%	40-140%
321-60-8	2-Fluorobiphenyl	127%	40-140%
3386-33-2	1-Chlorooctadecane	51%	40-140%
580-13-2	2-Bromonaphthalene	131%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC50005
Account: ENVTRAC EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49582-BS	DE17319 D	1	04/06/17	AP	04/05/17	OP49582	GDE963
OP49582-BSD	DE17320 D	1	04/06/17	AP	04/05/17	OP49582	GDE963

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC50005-1, MC50005-2, MC50005-3, MC50005-4, MC50005-5, MC50005-6, MC50005-7, MC50005-8, MC50005-9, MC50005-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	C11-C22 Aromatics (Unadj)	800	824	103	905	113	9	40-140/25
	C9-C18 Aliphatics	300	161	54 [a]	164	55 [a]	2	40-140/25
	C19-C36 Aliphatics	400	311	78	282	71	10	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	79%	86%	40-140%
321-60-8	2-Fluorobiphenyl	95%	116%	40-140%
3386-33-2	1-Chlorooctadecane	49%	40%	40-140%
580-13-2	2-Bromonaphthalene	105%	116%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP49582-BS	2-Methylnaphthalene	25 5	ND	0.0%	5 0
OP49582-BS	Naphthalene	22 0	ND	0.0%	5 0
OP49582-BSD	2-Methylnaphthalene	34 2	ND	0 0%	5 0
OP49582-BSD	Naphthalene	30 1	ND	0 0%	5 0

(a) Recovery of n-nonane was < 30% for laboratory control sample

7.2.1

7

* = Outside of Control Limits

Semivolatile Surrogate Recovery Summary

Job Number: MC50005
Account: ENVTRAC EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: MADEP EPH REV 1 1 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]	S3 [b]	S4 [a]
MC50005-1	DE17333.D	87	105	55	107
MC50005-2	DE17334.D	85	95	51	98
MC50005-3	DE17335 D	98	113	47	117
MC50005-4	DE17336 D	98	112	50	116
MC50005-5	DE17337 D	88	104	46	108
MC50005-6	DE17351 D	87	98	39* [c]	102
MC50005-6	DE17338 D	95	109	35* [c]	113
MC50005-7	DE17339 D	98	120	43	122
MC50005-8	DE17352 D	83	101	34* [c]	103
MC50005-8	DE17340 D	94	114	32* [c]	118
MC50005-9	DE17341 D	88	106	40	110
MC50005-10	DE17343 D	86	104	41	108
OP49582-BS	DE17319 D	79	95	49	105
OP49582-BSD	DE17320 D	86	116	40	116
OP49582-MB	DE17321 D	104	127	51	131

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 2-Fluorobiphenyl	40-140%
S3 = 1-Chlorooctadecane	40-140%
S4 = 2-Bromonaphthalene	40-140%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2
(c) Outside control limits due to possible matrix interference Confirmed by refractionation/reanalysis

7.3.1

7

SGS ACCUTEST
New England

Section 8

Misc. Forms

Custody Documents and Other Forms

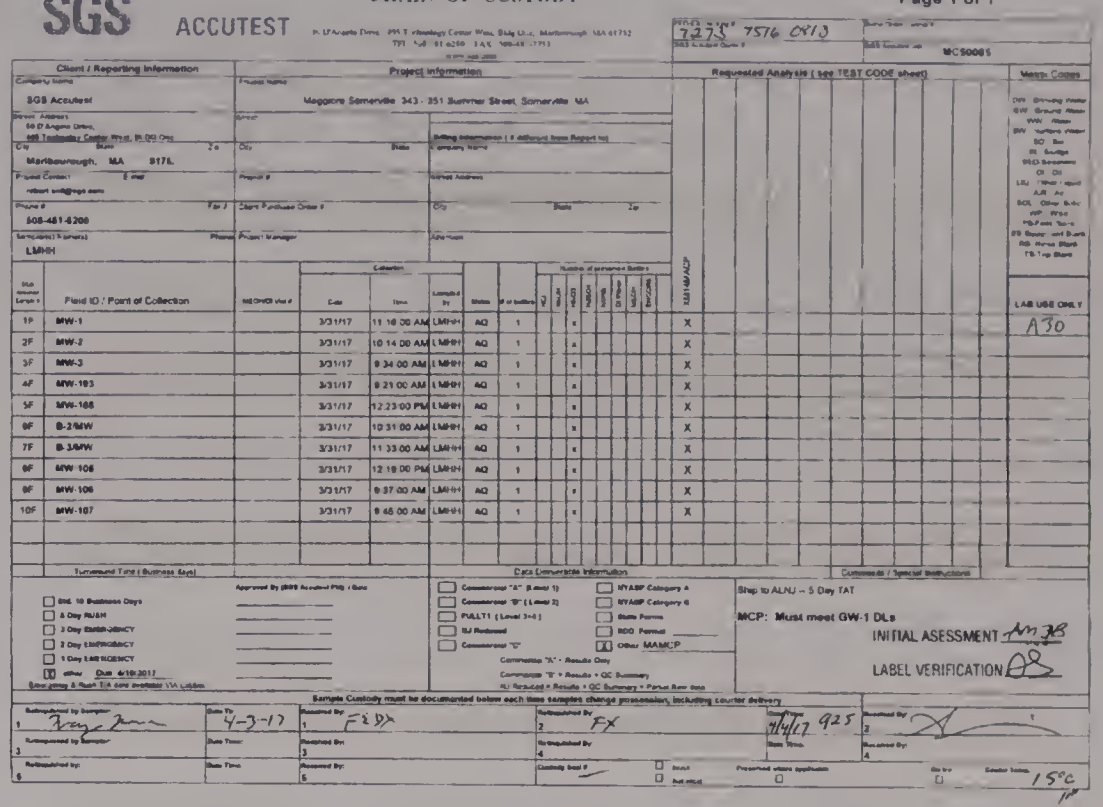
(SGS Accutest New Jersey)

Includes the following where applicable

- Chain of Custody
- Sample Tracking Chronicle
- QC Evaluation MA MCP Limits

8

SGS ACCUTEST CHAIN OF CUSTODY Page 1 of 1



Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)
Company Name: SGS Accutest	Project Name: Maggiore Somerville 343 - 351 Summer Street, Somerville MA	Matrix Codes
Street Address: 60 D'Angelo Drive, 495 Technology Center West, Bldg M, 2nd Floor	Street	
City: Marlborough, State: MA, Zip: 01752	City, State, Zip	
Project Contact: E-mail: robert.smith@sgs.com	Project #	
Phone #: 508-481-6200, Fax #	Client Purchase Order #	
Sampler(s) Name(s): LMHH, Phone	Project Manager	

Sample #	Field ID / Point of Collection	MA DHCS Use #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Number of preservative Bottles	8311 MA-MCP	LAB USE ONLY
1F	MW-1		3/31/17	11 16 00 AM	LMHH	AQ	1	x	X	A30
2F	MW-2		3/31/17	10 14 00 AM	LMHH	AQ	1	x	X	
3F	MW-3		3/31/17	9 34 00 AM	LMHH	AQ	1	x	X	
4F	MW-103		3/31/17	9 21 00 AM	LMHH	AQ	1	x	X	
5F	MW-108		3/31/17	12 23 00 PM	LMHH	AQ	1	x	X	
6F	B-2/MW		3/31/17	10 31 00 AM	LMHH	AQ	1	x	X	
7F	B-3/MW		3/31/17	11 33 00 AM	LMHH	AQ	1	x	X	
8F	MW-105		3/31/17	12 19 00 PM	LMHH	AQ	1	x	X	
9F	MW-106		3/31/17	9 37 00 AM	LMHH	AQ	1	x	X	
10F	MW-107		3/31/17	9 45 00 AM	LMHH	AQ	1	x	X	

Turnaround Time (Business days) — Approved By (SGS Accutest PM) / Date:
- Std. 10 Business Days
- 5 Day RUSH
- 3 Day EMERGENCY
- 2 Day EMERGENCY
- 1 Day EMERGENCY
- other Due 4/10/2017

(Use group 5 Rush TAT if pre-approved by PM)

Data Deliverable Information
- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- FULL T1 (Level 3+4)
- EQ Reduced
- Commercial "C"
- NYASP Category A
- NYASP Category B
- State Forms
- RDG Permit
- Other MAMCP

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
FULL T1 = Results + QC Summary + Forms Raw Data

Comments / Special Instructions: Ship to ALNJ -- 5 Day TAT
MCP: Must meet GW-1 DLs
INITIAL ASESSMENT AM 3/8
LABEL VERIFICATION AS

Sample Custody must be documented below each time samples change possession, including courier delivery

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1	4-3-17	1 FedEx	2 FX	4/4/17 925	2
3		3	4		4
5		5	Custody Seal #	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp. 1.5°C

MC 50005: Chain of Custody
Page 1 of 2
SGS Accutest New Jersey

8.1

8

SGS Accutest Sample Receipt Summary

Job Number: MC50005 Client: Project:

Date / Time Received: 4/4/2017 9 25 00 AM Delivery Method: Airbill #'s:

Cooler Temps (Raw Measured) °C: Cooler 1 (1 5),

Cooler Temps (Corrected) °C: Cooler 1 (2 9),

Cooler Security	Y or N			Y or N	
1 Custody Seals Present	☑	☐	3 COC Present	☑	☐
2 Custody Seals Intact	☑	☐	4 Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y or N
1 Temp criteria achieved	☑ ☐
2 Cooler temp verification.	IR Gun
3 Cooler media	Ice (Bag)
4 No Coolers	1

Quality Control Preservation	Y or N	N/A
1 Trip Blank present / cooler	☐ ☑	☐
2 Trip Blank listed on COC	☐ ☑	☐
3 Samples preserved properly	☑ ☐	
4 VOCs headspace free	☐ ☐	☑

Sample Integrity - Documentation	Y or N
1 Sample labels present on bottles	☑ ☐
2 Container labeling complete	☑ ☐
3 Sample container label / COC agree	☑ ☐

Sample Integrity - Condition	Y or N
1 Sample recvd within HT	☑ ☐
2 All containers accounted for	☑ ☐
3 Condition of sample	Intact

Sample Integrity - Instructions	Y or N	N/A
1 Analysis requested is clear	☑ ☐	
2 Bottles received for unspecified tests	☐ ☑	
3 Sufficient volume recvd for analysis	☑ ☐	
4 Compositing instructions clear	☐ ☐	☑
5 Filtering instructions clear	☐ ☐	☑

Comments

SM089-02
Rev Date 12/1/16

8.1

MC50005: Chain of Custody
Page 2 of 2

SGS Accutest

Internal Sample Tracking Chronicle

SGS Accutest New England

Job No: MC50005

ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50005-1 MW-1	Collected: 31-MAR-17 11:16 By: LMHH			Received: 03-APR-17 By: AS		
MC50005-1	SW846 7470A	05-APR-17 13 46	JA	05-APR-17	JA	HG
MC50005-1	SW846 6010C	06-APR-17 18 55	AB	05-APR-17	DM	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-2 MW-2	Collected: 31-MAR-17 10:14 By: LMHH			Received: 03-APR-17 By: AS		
MC50005-2	SW846 7470A	05-APR-17 13 48	JA	05-APR-17	JA	HG
MC50005-2	SW846 6010C	06-APR-17 18 58	AB	05-APR-17	DM	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-3 MW-3	Collected: 31-MAR-17 08:34 By: LMHH			Received: 03-APR-17 By: AS		
MC50005-3	SW846 7470A	05-APR-17 13 49	JA	05-APR-17	JA	HG
MC50005-3	SW846 6010C	06-APR-17 19 01	AB	05-APR-17	DM	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-4 MW-103	Collected: 31-MAR-17 09:21 By: LMHH			Received 03-APR-17 By: AS		
MC50005-4	SW846 7470A	05-APR-17 13 50	JA	05-APR-17	JA	HG
MC50005-4	SW846 6010C	06-APR-17 19 04	AB	05-APR-17	DM	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-5 MW-108	Collected: 31-MAR-17 12:23 By: LMHH			Received: 03-APR-17 By: AS		
MC50005-5	SW846 7470A	05-APR-17 13 55	JA	05-APR-17	JA	HG
MC50005-5	SW846 6010C	06-APR-17 19 12	AB	05-APR-17	DM	AG, AS, BA, BE, CD, CR, NI, PB, SB, SE, TL, V, ZN
MC50005-6 B-2/MW	Collected: 31-MAR-17 10:31 By: LMHH			Received: 03-APR-17 By: AS		
MC50005-6	SW846 7470A	05-APR-17 13 56	JA	05-APR-17	JA	HG

Page 1 of 2

8.2

Internal Sample Tracking Chronicle

SGS Accutest New England

Job No: MC50005

ENVIRAC Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No 03 990202 00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50005-6	SW846 6010C	06-APR-17 19 15	AB	05-APR-17	DM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC50005-7	Collected 31-MAR-17 11 33 By LMHH Received 03-APR-17 By AS					
B-3 MW						
MC50005-7	SW846 7470A	05-APR-17 13 57	JA	05-APR-17	JA	HG
MC50005-7	SW846 6010C	06-APR-17 19 18	AB	05-APR-17	DM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC50005-8	Collected 31-MAR-17 12 19 By LMHH Received 03-APR-17 By AS					
MW-105						
MC50005-8	SW846 7470A	05-APR-17 13 58	JA	05-APR-17	JA	HG
MC50005-8	SW846 6010C	06-APR-17 19 20	AB	05-APR-17	DM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC50005-9	Collected 31-MAR-17 09 37 By LMHH Received 03-APR-17 By AS					
MW-106						
MC50005-9	SW846 7470A	05-APR-17 14 00	JA	05-APR-17	JA	HG
MC50005-9	SW846 6010C	06-APR-17 19 23	AB	05-APR-17	DM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN
MC50005-10	Collected 31-MAR-17 08 45 By LMHH Received 03-APR-17 By AS					
MW-107						
MC50005-10	SW846 7470A	05-APR-17 14 01	JA	05-APR-17	JA	HG
MC50005-10	SW846 6010C	06-APR-17 19 26	AB	05-APR-17	DM	AG,AS,BA,BE,CD,CR,NI,PB,SB,SE,TL,V,ZN

8.2

8

QC Evaluation: MA MCP Limits

Job Number: MC50005
Account: SGS Accutest New England
Project: ENVIRAC Maggiore Somerville 343 - 351 Summer Street, Somerville, MA
Collected: 03 31 17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found

* Sample used for QC is not from job MC50005

8.3

8

SGS ACCUTEST
New England

Section 9

Metals Analysis

QC Data Summaries

(SGS Accutest New Jersey)

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC50005
Account: ALNE - SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

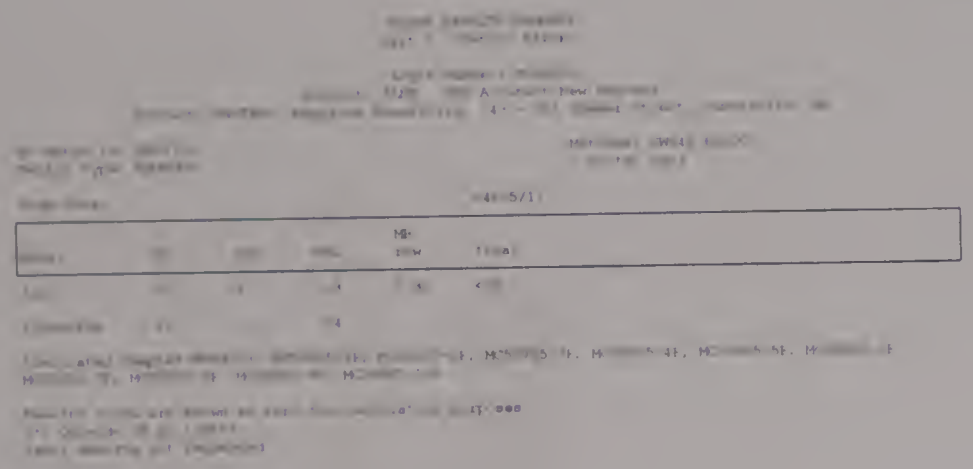
QC Batch ID: MP99703
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

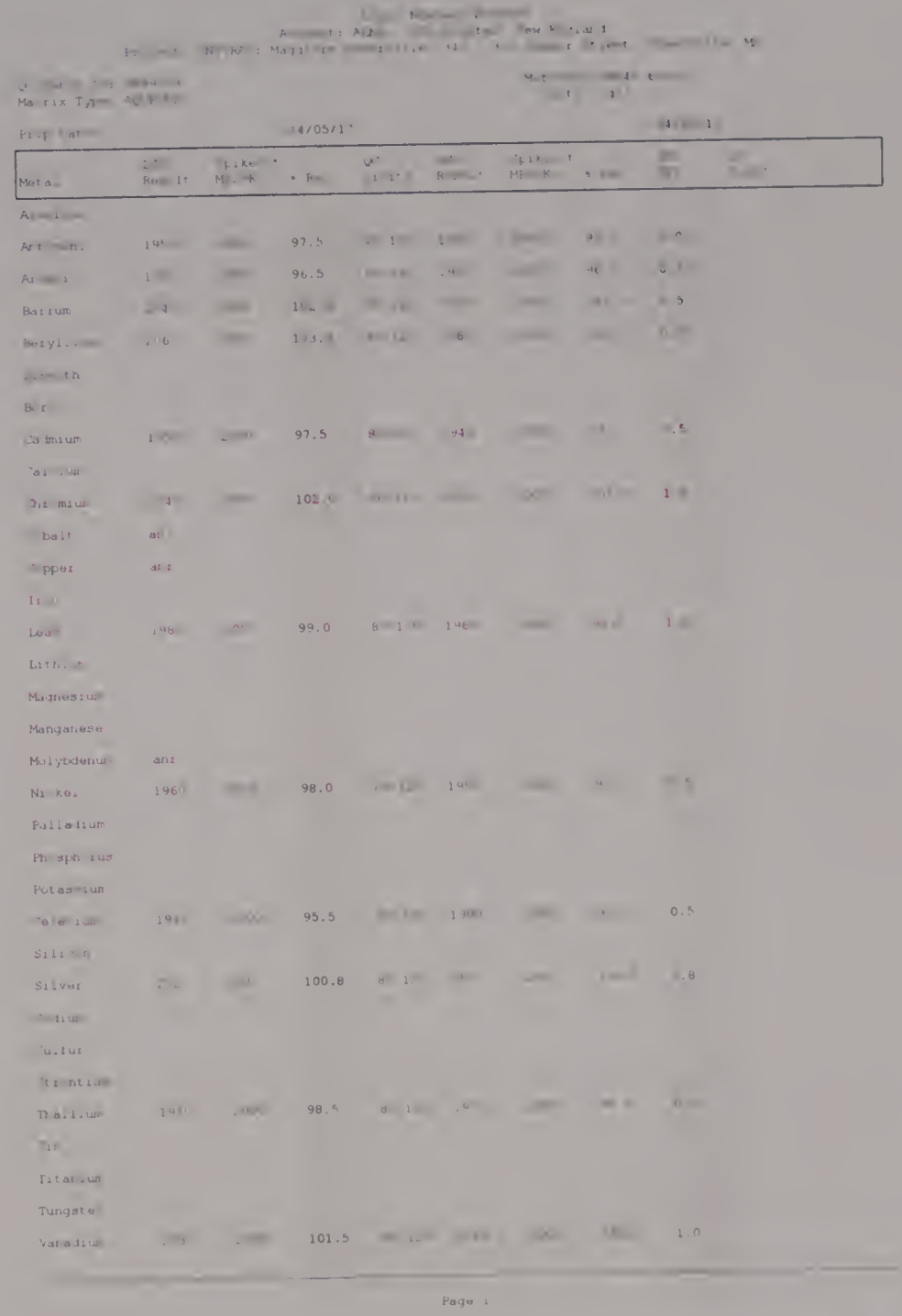
Prep Date: 04/05/17

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	10	21		
Antimony	6.0	2.5	3.3	1.4	<6.0
Arsenic	3.0	2.2	2.2	-1.2	<3.0
Barium	200	.2	.44	0.0	<200
Beryllium	1.0	.1	.25	0.0	<1.0
Bismuth	20	2.1	2.9		
Boron	100	1.9	3.9		
Cadmium	3.0	.3	.4	0.10	<3.0
Calcium	5000	32	33		
Chromium	10	.3	.81	0.10	<10
Cobalt	50	.4	.69		
Copper	10	2.4	2.4		
Iron	100	4.3	12		
Lead	3.0	2	2.3	1.0	<3.0
Lithium	20	2	4		
Magnesium	5000	34	85		
Manganese	15	.1	.39		
Molybdenum	20	.4	.88		
Nickel	10	.6	.76	0.0	<10
Palladium	50	2	3.7		
Phosphorus	50	3.1	3.[illegible]		
Potassium	10000	36	120		
Selenium	10	5.1	4.1	-0.80	<10
Silicon	200	5.7	29		
Silver	10	.4	.88	0.20	<10
Sodium	10000	22	24		
Sulfur	50	6.6	6.9		
Strontium	10	.1	.22		
Thallium	2.0	1.9	1.9	-0.50	<2.0
Tin	10	2	2.3		
Titanium	10	.4	.99		
Tungsten	50	1.7	3.[illegible]		
Vanadium	50	.3	.66	0.10	<50

Page 1



				MS-	



Matrix T

Meta	Result	Like	Re	Recov	Like		
Aluminum							
Antimony	19		97.5				
Arsenic	1		96.5				
Barium							0.5
Beryllium	.06		103.8				
Bismuth							
Boron							
Cadmium	1		97.5				0.5
Calcium							
Chromium			102.0				1.0
Cobalt	ani						
Copper	ani						
Iron							
Lead	.98		99.0				1.0
Lithium							
Magnesium							
Manganese							
Molybdenum	ani						
Nickel	196		98.0				0.5
Palladium							
Phosphorus							
Potassium							
Selenium	19		95.5				0.5
Silicon							
Silver			100.8				0.8
Sodium							
Sulfur							
Strontium							
Thallium	19		98.5				0.5
Tin							
Titanium							
Tungsten							
Vanadium			101.5				1.0

Page 1

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC50005
Account: ALNE SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP99703
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 04/05/17 04/05/17

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSD Result	Spikelot MPSPK2	% Rec	BSD RPD	QC Limit
Zinc	1980	2000	99.0	80-120	1970	2000	98.5	0.5	
Zirconium									

Associated samples MP99703: MC50005-1F, MC50005-2F, MC50005-3F, MC50005-4F, MC50005-5F, MC50005-6F, MC50005-7F, MC50005-8F, MC50005-9F, MC50005-10F

Results IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.1.2

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC50005
Account: ALNE - SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

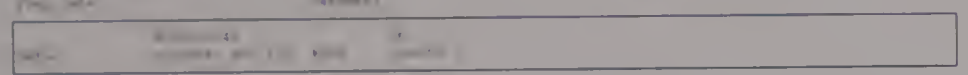
QC Batch ID: MP99703
Matrix Type: AQUEOUS

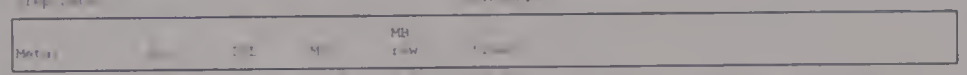
Methods: SW846 6010C
Units: ug/l

Prep Date: 04/05/17

Metal	JC40220-4F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	171	167	2.1	0-10
Beryllium	0.00	0.00	NC	0-10
Bismuth				
Boron				
Cadmium	0.300	0.00	100.0(a)	0-10
Calcium				
Chromium	2.70	2.70	0.0	0-10
Cobalt	anr			
Copper	anr			
Iron				
Lead	3.70	0.00	100.0(a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	7.70	7.00	9.1	0-10
Palladium				
Phosphorus				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	1.10	0.00	100.0(a)	0-10
Sodium				
Sulfur				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	0.900	0.00	100.0(a)	0-10

9.1.3





SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC50005
Account: ALNE - SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP99709
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date:		04/05/17				04/05/17		
Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits	BSD Result	Spikelot HGPW3	% Rec	BSD RPD	QC Limit
Mercury	1.8	2	90.0	80-120	2.1	2	105.0	15.4	

Associated samples MP99709: MC50005-1F, MC50005-2F, MC50005-3F, MC50005-4F, MC50005-5F, MC50005-6F, MC50005-7F, MC50005-8F, MC50005-9F, MC50005-10F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.2.2

9

APPENDIX E

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

MAEVE VALLELY BARTLETT
Secretary

DAVID W. CASH
Commissioner

BEST MANAGEMENT PRACTICES ("BMPS") FOR NON-COMMERCIAL GARDENING AT DISPOSAL SITES

WSC # 14-910

This document provides guidance on the use of Best Management Practices or "BMPs" for gardening at locations within the boundary of a disposal site cleaned up pursuant to the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000.

This document is intended solely as guidance. It is not a regulation, rule or requirement, and should not be construed as mandatory. It does not create any substantive or procedural rights, and is not enforceable by any party in any administrative proceeding with the Commonwealth. This document provides guidance on approaches the Massachusetts Department of Environmental Protection (MassDEP) considers acceptable for meeting requirements set forth in the MCP. Parties using this guidance should be aware that other acceptable alternatives may be available for achieving and documenting compliance with the applicable regulatory requirements and performance standards of the MCP.

Benjamin J. Ericson
Assistant Commissioner

12/31/14

This information is available in alternate format. Call Michelle Waters-Ekanem, Diversity Director, at 617-292-5751. TDD# 1-866-539-7622 or 1-617-574-6868
MassDEP Website: www.mass.gov/dep
Printed on Recycled Paper

1.0 Introduction: Why Should Gardening Best Management Practices Be Used?

It is not uncommon for properties in Massachusetts to have measurable levels – usually low levels – of contaminants such as lead or petroleum hydrocarbons in soil. These contaminants may be present from natural sources or as a result of human activities on or around the property. Some contamination may require cleanup based on the standards published by the Massachusetts Department of Environmental Protection (MassDEP) in 310 CMR 40.0000, the Massachusetts Contingency Plan (MCP), although even properties that have been cleaned up under the MCP will likely have measurable residual levels of some contaminants remaining in the soil. Such residual levels are safe and protective when they meet the cleanup requirements.

MassDEP recognizes that in a residential setting, yards and gardens are areas where people are most likely to have increased direct and indirect contact with soils, and that many gardeners may wish to further reduce their exposure to even residual contaminants in soil. Therefore MassDEP has developed recommendations for practical techniques, or Best Management Practices ("BMPs"), for non-commercial gardening in areas that may still contain residual levels of contaminants. These BMPs are consistent with national guidance on urban gardening and reflect a consensus among gardening experts on measures that effectively reduce exposure to common contaminants that may occur through non-commercial gardening. They work by isolating the garden from any contamination remaining in the soil below through the use of impermeable barriers and/or raised garden beds, and other relatively simple, common sense measures.

In all cases, the *use* of the recommended BMPs is optional. The *inclusion* of BMPs and a recommendation for their use in an MCP Permanent Solution Statement that documents the disposal site assessment and cleanup is required in specific circumstances, however, to inform current and future occupants of a property of practical methods to further reduce exposure to residual soil contaminants during gardening.

2.0 Purpose

The purpose of this guidance is to support Potentially Responsible Parties and Licensed Site Professionals in preparing those Permanent Solution Statements that, pursuant to 310 CMR 1056(2)(j)1 and based on a Method 3 risk characterization, require inclusion of "the recommendation and description of Best Management Practices for Non-commercial Gardening in a residential setting to minimize and control potential risk qualitatively evaluated pursuant to 310 CMR 40.0923(3)(c)." More generally, beyond the

required recommendation for BMPs under the MCP, MassDEP encourages the optional use these gardening BMPs or similar measures by gardeners in residential settings who wish to reduce their potential exposure to soil contaminants.

3.0 Scope and Applicability

The following provisions are relevant to including the recommendation of gardening BMPs in a Permanent Solution Statement as part of a Permanent Solution with Conditions:

- 310 CMR 40.0006(12) (definition of Best Management Practices for Non-commercial Gardening)
- 310 CMR 40.1056(2)(j)1 (Content of Permanent Solution Statements);
- 310 CMR 40.1041(2)(c)2 (Categories of Permanent Solutions);
- 310 CMR 40.40.1013 (Limitations, Assumptions and Conditions on Site Activities and Uses That Do Not Require an AUL); and
- 310 CMR 40.0923(3)(c) (Identification of Site Activity and Uses).

The MCP defines gardening BMPs as follows:

> Best Management Practices for Non-commercial Gardening means current practices generally accepted by practitioners of safe gardening methods that limit potential human exposure to OHM during gardening activities and as the result of consumption of fruits and vegetables grown in a non-commercial garden. Such practices include, but are not limited to: locating garden beds outside of areas affected by releases of OHM; gardening in raised beds above a barrier layer; use of soil and soil amendments unaffected by releases of OHM in garden beds; and covering adjacent areas to limit the transfer of OHM from windborne material into garden beds.

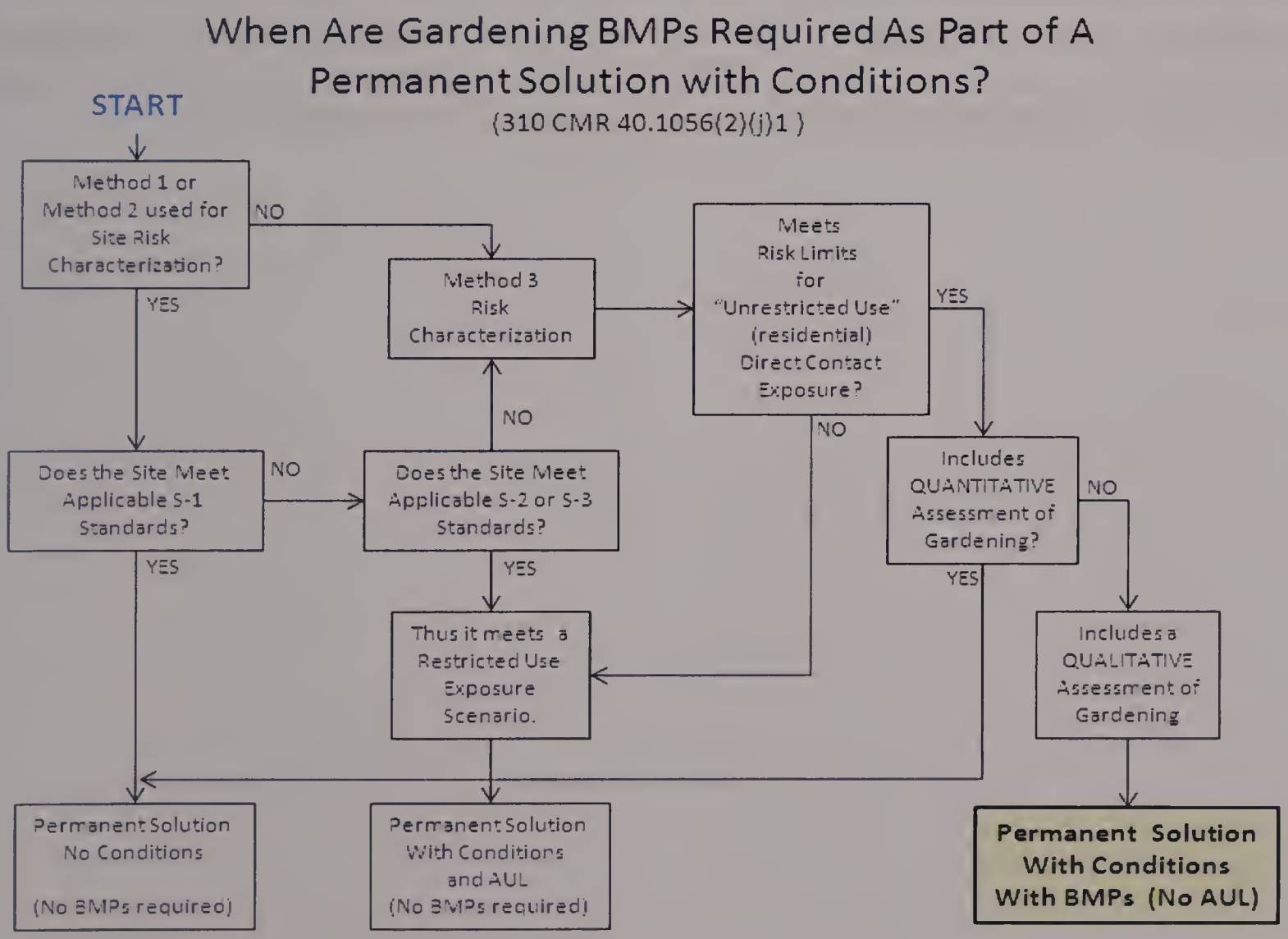
As required at 310 CMR 40.1056(2)(j)1, where applicable to disposal sites evaluated using a Method 3 Risk Characterization, "the recommendation and description of Best Management Practices for Non-commercial Gardening in a residential setting to minimize and control potential risk qualitatively evaluated pursuant to 310 CMR 40.0923(3)(c)" must be included in the disposal site Permanent Solution Statement. The gardening BMPs requirement applies to disposal sites that are demonstrated to pose No Significant Risk of Harm to Health using a Method 3 Risk Characterization that includes:

(a) the assumption of unrestricted use (including residential use) of the property;
(b) a quantitative assessment of direct contact exposures (ingestion, dermal contact and inhalation) to soil; and

(c) a *qualitative* assessment of incremental exposures associated with gardening activities.

In those cases where a *quantitative* assessment of exposures associated with gardening is conducted and the disposal site is shown to meet risk limits for gardening, then inclusion of gardening BMPs descriptions and a recommendation for their use in the Permanent Solution Statement is *not* required. Figure 1 below illustrates when inclusion of gardening BMPs descriptions and a recommendation for their use is required as part of a Permanent Solution with Conditions.

Figure 1


When Are Gardening BMPs Required As Part of A Permanent Solution with Conditions?
(310 CMR 40.1056(2)(j)1)
START
Method 1 or Method 2 used for Site Risk Characterization?
NO
YES
Method 3 Risk Characterization
Meets Risk Limits for "Unrestricted Use" (residential) Direct Contact Exposure?
YES
NO
Does the Site Meet Applicable S-1 Standards?
NO
YES
Does the Site Meet Applicable S-2 or S-3 Standards?
NO
YES
Includes QUANTITATIVE Assessment of Gardening?
NO
YES
Thus it meets a Restricted Use Exposure Scenario.
Includes a QUALITATIVE Assessment of Gardening
Permanent Solution No Conditions
(No BMPs required)
Permanent Solution With Conditions and AUL
(No BMPs required)
Permanent Solution With Conditions With BMPs (No AUL)

4.0 Best Management Practices for Non-Commercial Gardening

The attachment below, "Best Management Practices for Non-commercial Gardening at Disposal Sites," is appropriate for use to meet the requirement at 310 CMR 40.1056(2)(j)1 to include in the Permanent Solution Statement a "recommendation and description of Best Management Practices for Non-commercial Gardening in a residential setting to minimize and control potential risk qualitatively evaluated pursuant to 310 CMR 40.0923(3)(c)."

To highlight and assist readers in locating this information in the Permanent Solution Statement, these BMPs should appear under a distinct heading in the Permanent Solution Statement and be identified as a distinct item in the Table of Contents of the Permanent Solution Statement. The narrative of the Permanent Solution Statement should provide some context for the BMPs, including a reference to recommended use of the BMPs as a condition of the Permanent Solution with Conditions.

Attachment
Best Management Practices for Non-commercial Gardening at Disposal Sites

Best Management Practices for Non-commercial Gardening at Disposal Sites

This property is part of a disposal site that has been assessed and determined to meet the requirements of a Permanent Solution with Conditions under the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, where the Conditions include the recommendation of Best Management Practices ("BMPs") for gardening to reduce the potential risks from exposure to contaminated soil that remains on the site.

While the property has been determined to be safe for unrestricted use, including residential use, there are residual levels of contaminants remaining in the soil. Gardeners should consider implementing BMPs to further reduce potential exposure to material in the soil, regardless of the contaminant levels remaining. Implementing BMPs such as those suggested below will allow safer gardening in a wider range of site conditions. Not every BMP is necessary for every single site, but a combination of BMPs appropriate for your particular site will help reduce the potential for additional exposure.

Construct Physical Controls and Improve Soil Conditions

Actions to minimize contact (covering the soil) and reduce contaminant levels (such as amending the soil) will further reduce potential risks. Many good gardening practices, like adding compost and soil amendments, improve the soil while reducing the amount of contaminants and exposure to them. Recommendations include:

- Build your garden away from areas known or suspected to be contaminated. In addition to areas where residual contamination may be present, as identified by the disposal site assessment, other sources of contamination can include painted structures (particularly older buildings that may have been painted with lead paint), roads and rail lines.
- Build a hedge or fence to reduce windblown contamination from mobile sources and busy streets.
- Cover existing soil and walkways with mulch, landscape fabric, stones, or bricks.
- Use mulch in your garden beds to reduce dust and soil splash back, reduce weed establishment, regulate soil temperature and moisture, and add organic matter.
- Use soil amendments (such as lime and compost) to maintain neutral pH and add organic matter to improve soil structure.
    - Not all amendments are the same; be sure to choose the right amendments for your soil - amendments that improve conditions at one garden may not work well in others.
    - Keep in mind that each amendment type will have different application amounts and techniques (e.g., rototilling), and may need to be maintained and reapplied (e.g., annually).

    - Be sure to work with your local or state regulatory agency, and ask if your municipality provides free compost or mulch. Obtain compost only from a reputable source that can provide information regarding the quality and type of feedstock used to generate the compost.
- Add topsoil or clean fill from a reputable source that can provide information regarding the quality of the topsoil or fill to ensure the soil is safe for handling by children or gardeners of all ages and for food production.
- Build raised beds or container gardens.
    - Raised beds can be made by simply mounding soil into windrows or by building containers.
    - Raised beds help improve water drainage in heavy clay soils or low-lying areas. They also create accessible gardening locations for many users and allow for more precise soil management.
    - Foot traffic should not be necessary in the bed, so the soil does not become compacted and soil preparation in the coming years is minimized.
    - Place a water permeable fabric cover or geotextile as the bottom layer of your raised bed to further reduce exposure to soils of concern.
    - Sided beds can be made from wood, synthetic wood, stone, concrete block, brick or naturally rot-resistant woods such as cedar and redwood. Avoid using chemical-treated lumber for the raised bed because chemicals used in the treated wood could make their way into the soils and plants.

Minimize Ongoing Contact with or Ingestion of Soil

Actions to further reduce contact with soil during and after gardening activities can also minimize potential risks from any contaminants remaining in the soil.

- Do not use plants grown in contaminated soil for compost.
- Work in the garden when soil is moist or damp to minimize creation of dust.
- Avoid "double-digging" to decrease likelihood of moving deep soils to the surface.
- Wear gloves, long sleeves and pants while gardening to prevent skin exposure;
- Remove gardening shoes and garments before entering the home, and wash gardening clothes separately from other clothing.
- Wash hands after gardening.
- Wash all vegetables thoroughly.

For More Information

These recommended BMPs are consistent with federal, state and local guidance on urban gardening in general. MassDEP has additional information available online at: http://www.Mass.Gov/eea/agencies/massdep/cleanup/regulations/gardening-best-management-practices-at-disposal-sites.html

APPENDIX F

EnviroTrac
Environmental Services

February 14, 2018

Mayor Joseph A. Curtatone
City of Somerville
City Hall
98 Highland Avenue
Somerville, Massachusetts 02143

Subject: **Notice of Availability - Permanent Solution Statement**
343-351 Summer Street
Somerville, Massachusetts
MassDEP RTN 3-34098

To Whom it May Concern:

In accordance with the Massachusetts Contingency Plan (MCP), as set forth at 310 CMR 40.1403(3)(f), notification is hereby made that a Permanent Solution Statement was submitted to the Massachusetts Department of Environmental Protection (MassDEP) for the subject property.

A copy of the Permanent Solution Statement can be obtained directly from the MassDEP Waste Site / Reportable Release Look Up web site at http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=3-0033149 or from EnviroTrac by calling (781) 793-0074 or by sending a request in writing to my attention at 2 Merchant Street, Suite 2, Sharon, MA 02067.

Sincerely,
EnviroTrac Ltd.

Robert H. Bird, LSP
Principal Hydrogeologist

cc: MassDEP NERO

EnviroTrac
Environmental Services

February 14, 2018

Board of Health
City of Somerville
City Hall Annex
50 Evergreen Avenue
Somerville, Massachusetts 02145

Subject: **Notice of Availability - Permanent Solution Statement**
343-351 Summer Street
Somerville, Massachusetts
MassDEP RTN 3-34098

To Whom it May Concern:

In accordance with the Massachusetts Contingency Plan (MCP), as set forth at 310 CMR 40.1403(3)(f), notification is hereby made that a Permanent Solution Statement was submitted to the Massachusetts Department of Environmental Protection (MassDEP) for the subject property.

A copy of the Permanent Solution Statement can be obtained directly from the MassDEP Waste Site / Reportable Release Look Up web site at http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=3-0033149 or from EnviroTrac by calling (781) 793-0074 or by sending a request in writing to my attention at 2 Merchant Street, Suite 2, Sharon, MA 02067.

Sincerely,
EnviroTrac Ltd.

Robert H. Bird, LSP
Principal Hydrogeologist

cc: MassDEP NERO

APPENDIX G

RESPONSE TO COMMENTS ON RELEASE ABATEMEMENT MEASURE STATUS REPORT

343-349 SUMMER STREET
SOMERVILLE, MASSACHUSETTS
RTN 3-34098

February 6, 2018

A release of oil and/or hazardous materials has occurred at this location, which is a disposal site as defined by M.G.L. c. 21E, §2 and the Massachusetts Contingency Plan, 310 CMR 40.0000. On March 8, 2017, 351 Summer LLC received a petition from residents in Somerville requesting public involvement in any Immediate Response Actions and/or Release Abatement Measures taking place at this disposal site, in accordance with M.G.L. c. 21E §14(a) and 310 CMR 40.1403(9).

A Release Abatement Measure (RAM) Status Report was made available for review and comment on November 30, 2017. As required by the MCP (310 CMR 40.1304(9)), a 20-day public comment period following the Public Information Meeting held on December 18, 2017 was provided. The public comment period closed on January 7, 2018 at 11:59 pm. The public comments received during this period were considered, and if relevant and appropriate, will be incorporated into a revised RAM Status Report.

Public comments were submitted by the following interested parties:

1. Nancy Iappini via e-mail on January 7, 2018;
2. Joseph Tierney via e-mail on January 7, 2018;
3. Karina Wilkinson via e-mail on January 7, 2018, and;
4. City of Somerville via e-mail on January 6, 2018.

Following the public comment period, the MCP (310 CMR 40.1403(9)(c)(4)) provides for a 30-day period for 351 Summer LLC to provide a written summary of, and response to, the public comments. This response period ends February 6, 2018.

Presented below is the text of the comments received during the public comment period (December 18, 2017 through January 7, 2018) and the response to relevant comments in blue text.

1. *(Nancy Iappini): "Specific to the December 18 2017 meeting, without consulting the public Mr. Bird independently chose the date of December 18, 2017. Neighbors informed Mr. Bird that this date would not allow the public's participation as it conflicted with holiday travel and commitments already in place and requested an alternative date. Mr. Bird refused to change the date of the meeting. The point of a PIP meeting is to allow for public participation in the clean up process of the site.*

   Full disclosure of environmental data related to this site uncovered by Mr. Bird's work has not been shared with the public despite our numerous and repeated requests. Certain reports have been withheld or produced only after comment periods have closed throughout this process. Data gleaned from testing done at the rear of my house along the fence and shared property line was provided, but when Mr. Bird was asked to put it into an 'apples to apples' comparison and discussion like the other reports he produced related to this site, he refused despite results showing Reportable Concentrations in the soil behind my property. We thought this is what an LSP was hired to deal with in the interest of public health.

   Referring to the soil which will remain as landscape on the site (most of which runs along the shared property line of the Hawthorne Street backyards), there is a large amount of soil yet to be tested and we request that testing be done asap, to be followed by a public meeting to discuss these results and the data supplied to me from previously mentioned testing and those Reportable Conditions. We request that the remaining uncovered soil be removed and replaced w uncontaminated soil as directed by Jeffrey Nangle of Nangle Consulting, overseeing LSP. It is my understanding from conversations w Ms. Iris Davis, DEP, that the health of the public could be at risk when all site soil is not fully tested or permanently covered."

   The Public Information meeting held on December 18, 2017 to discuss the RAM Status Report was not required by the Massachusetts Contingency Plan (MCP), but was held in the spirit of transparency to keep the public informed. Due to scheduling conflicts with the venue and personnel, the selected date was the only available date prior to the Christmas holiday. Postponement of the meeting to a date after the holidays would approach the impending public meeting for the RAM Completion and Permanent Solution.

   All MCP site-related data has been provided to the public both electronically, via upload to the MassDEP web site, and in paper form at the Somerville Public Library. No data has been withheld.

   The final evaluation of site data will be presented in the RAM Completion Report and Permanent Solution Statement. Speculation as to the risk posed by remaining soil and the need to remove additional soil is premature and unfounded.

2. *(Joseph Tierney): "I am particularly concerned about those areas of the 343-351 Summer Street development that will be left as uncovered, landscaped areas. This includes an area of around 3,700 square feet on the north side of the site, a smaller area of approximately 600 sf around the MBTA vent shaft, and a less well-defined area at the front of the building on Summer Street. All three of these potential landscaped areas are in proximity to, or contain various soil test measurement sites that indicate various levels of organic contaminants and lead as shown in the attached table.*

I request LSP Bird and the Maggiore LLC do further testing of the soil in those three areas that will be left in place, and uncovered, and have been shown to contain various contaminants. As an alternative, I request that this remaining uncovered soil be removed and replaced with uncontaminated soil as suggested by the City of Somerville's LSP, Jeffrey Nangle, at an earlier meeting."

The final evaluation of site data will be presented in the RAM Completion Report and Permanent Solution Statement. Speculation as to the risk posed by remaining soil and the need to remove additional soil is premature.

3. *(Karina Wilkinson): "As we noted in our June 11, 2017 comments, the preliminary Disposal Site Boundary contains approximately 22,500 cubic yards (CY) of soil. According to LSP Bird's August 30, 2017 presentation, some 11,000 CY of soil were excavated and disposed of. This means that about half of the soil will remain on the site.*

Our primary concern is with the area that will be landscaped. This includes approximately 3,725 square feet (SF) in back of the building adjacent to Hawthorne Street residences as well as 640 SF of grassy area around the MBTA vent. Based on the preliminary Disposal Site Boundary depth of 15 feet, this would amount to at least 2,425 CY of potentially contaminated and mostly untested soil with 2,069 CY along the property lines of Hawthorne Street residents. There is additional landscaping of undetermined square footage on the east and west sides of the property, as well as in the parking lot wedges.

Limited testing in the areas to be landscaped turned up Reportable Concentrations of oil by-products and lead (including the area adjacent to Nancy Iappini's property and PC-20 tested down a mere 18 inches). On December 18, 2017, LSP Nangle asserted that he would bring in 3 feet of "fill," for those areas where the soil will remain accessible. We are requesting thorough testing of areas of the site that will be landscaped, as well as a sincere discussion of whether leaving the soil in the landscaped areas in place is a better option than removing it, for both future residents of 351 Summer Street and current and future residents of the adjacent properties on Hawthorne Street."

The final evaluation of site data will be presented in the RAM Completion Report and Permanent Solution Statement. Speculation as to the risk posed by remaining soil and the need to remove additional soil is premature.

4. *(City of Somerville): "Attached are the City's comments regarding the latest on the RAM plan as presented at the December 18th meeting - as developed by city consultant Jeffrey Nangle."*

A copy of the City of Somerville's comments, as prepared by Nangle Consulting Associates, Inc. (NCA), is attached.

The final evaluation of site data will be presented in the RAM Completion Report and Permanent Solution Statement. Speculation as to the risk posed by remaining soil and the need to remove additional soil is premature.

The Permanent Solution Statement will provide data interpretation and conclusions with respect to the attainment of a condition of No Significant Risk and a Permanent Solution.

ATTACHMENT

From:	oshea-iappini@rcn.com
To:	Robert H. Bird, LSP
Cc:	jtierney@alum.mit.edu; Catherine Guthrie; bob dempkowski; Carol Dempkowski; Mary Louise Gray; A Laramie; Tomas Bok; Marc Maxwell; Iris Davis (DEP); Karen.Stromberg@State.MA.US; George O"Shea; Lance Davis; Denise Provost - Rep. (HOU); Matt Maggiore; Jeffrey Nangle; rogerschwarzschild@gmail.com; William WhiteSPS; Abbey Eisenhower; philip groth; Cornelia Tierney; Karina Wilkinson; George Proakis
Subject:	Comments on: RTN 3-34098
Date:	Sunday, January 07, 2018 9:45:51 PM

January 7, 2018

Regarding Release Tracking Number (RTN) 3-34098, 343-349 and 351 Summer Street, Somerville, MA

Comments and requests from Nancy Iappini following the PIP meeting held on December 18 2017 by LSP Robert Bird Envirotrac

Specific to the December 18 2017 meeting, without consulting the public Mr. Bird independently chose the date of December 18, 2017. Neighbors informed Mr. Bird that this date would not allow the public's participation as it conflicted with holiday travel and commitments already in place and requested an alternative date. Mr. Bird refused to change the date of the meeting. The point of a PIP meeting is to allow for public participation in the clean up process of the site.

Full disclosure of environmental data related to this site uncovered by Mr. Bird's work has not been shared with the public despite our numerous and repeated requests. Certain reports have been withheld or produced only after comment periods have closed throughout this process. Data gleaned from testing done at the rear of my house along the fence and shared property line was provided, but when Mr. Bird was asked to put it into an 'apples to apples' comparison and discussion like the other reports he produced related to this site, he refused despite results showing Reportable Concentrations in the soil behind my property. We thought this is what an LSP was hired to deal with in the interest of public health.

Referring to the soil which will remain as landscape on the site (most of which runs along the shared property line of the Hawthorne Street backyards), there is a large amount of soil yet to be tested and we request that testing be done asap, to be followed by a public meeting to discuss these results and the data supplied to me from previously mentioned testing and those Reportable Conditions. We request that the remaining uncovered soil be removed and replaced w uncontaminated soil as directed by Jeffrey Nangle of Nangle Consulting, overseeing LSP. It is my understanding from conversations w Ms. Iris Davis, DEP, that the health of the public could be at risk when all site soil is not fully tested or permanently covered.

Thank you
Nancy Iappini
36 Hawthorne Street

From:	Joseph Tierney
To:	Robert H. Bird, LSP; joetierney34@gmail.com; writer@catherineguthrie.com; stephgrey@mac.com; bobdemp@yahoo.com; mlg@indiana.edu; dempkowski@hotmail.com; tomas.j.bok@gmail.com; marcamaxwell@gmail.com; iris.davis@state.ma.us; karen.stromberg@state.ma.us; oshea@fas.harvard.edu; kcomo@somervillema.gov; lancedavisward6@gmail.com; denise.provost@mahouse.gov; matt@maggiorecos.com; jnangle@ncaenv.com; Schwarzschild, Roger; gproakis@somervillema.gov; william.a.white@verizon.net; Nancy Iappini; aeisenho@gmail.com; philip.groth@gmail.com; ingridbalskus@hotmail.com; Tierney, Cornelia; vito.lore@gmail.com; gspeters23@yahoo.com
Subject:	Response to the updated Release Abatement Measure (RAM) 343-351 Summer Street RTN 3-34098
Date:	Sunday, January 07, 2018 6:04:38 PM
Attachments:	Exceedances 343-51 Summer .xlsx

This is a formal comment in response to the updated Release Abatement Measure (RAM) Status Report dated October 24, 2017 regarding

RTN 3-34098

I am particularly concerned about those areas of the 343-351 Summer Street development that will be left as uncovered, landscaped areas. This includes an area of around 3,700 square feet on the north side of the site, a smaller area of approximately 600 sf around the MBTA vent shaft, and a less well-defined area at the front of the building on Summer Street. All three of these potential landscaped areas are in proximity to, or contain various soil test measurement sites that indicate various levels of organic contaminants and lead as shown in the attached table.

I request LSP Bird and the Maggiore LLC do further testing of the soil in those three areas that will be left in place, and uncovered, and have been shown to contain various contaminants.As an alternative, I request that this remaining uncovered soil be removed and replaced with uncontaminated soil as suggested by the City of Somerville's LSP, Jeffrey Nangle, at an earlier meeting.

Sincerely,

Joseph Tierney, 35 Hawthorne Street, Unit 2.

343-351 Summer Street Development
Measured contaminant exceedances at remaining exposed sites

Area of Concern (See landscape plan	Test Point	Contaminant	amount
	depth in feet		mg/kg
			(MCP level)
North Side landscaped area	B-203	(Benzo(a)anthracene	8.9 (7.0)
(Hawthorne St. Side)	0-2	Benzo(a)pyrene	8.3 (2.0)
		Benzo(b)fluoranthene	14 (7.0)
		Lead	830 (200)
	PC-20(comp)	Acenaphthylene	1.01 (1.0)
	0-1.5	Benzo(a)anthracene	8.6 (7.0)
		Benzo(a)pyrene	7.9 (2.0)
		Benzo(b)fluoranthene	9.2 (7.0)
		Dibenzo (a,h)anthracen	1.8 (0.7)
		Phenanthrene	16.2 (10)
Around MBTA Vent Shaft	B-206	Benzo(a)pyrene	2.3 (2.0)
	2-3		
	PC-21(comp)	Benzo(a)pyrene	3.1 (2.0)
	0-1.5		
Front of Building (Summer St.)	PC-15	Benzo(a)pyrene	5.22 (2.0)
	0-15	)ibenzo (a,h)anthracen	1.05 (0.7)
generated on 01/7/18 by Joseph Tierney			

From:	Karina Wilkinson
To:	Robert H. Bird, LSP
Cc:	jtierney@alum.mit.edu; Catherine Guthrie; Stephanie Grey; bob dempkowski; Carol Dempkowski; Mary Louise Gray; A Laramie; Tomas Bok; Marc Maxwell; Iris Davis (DEP); Karen.Stromberg@State.MA.US; George O"Shea; Kelly Como; Lance Davis; Denise Provost - Rep. (HOU); Matt Maggiore; Jeffrey Nangle; rogerschwarzschild@gmail.com; George Proakis; William WhiteSPS; oshea-iappini@rcn.com; Abbey Eisenhower; philip groth; Ingrid Balskus; Cornelia Tierney; Vito Lore; gretchen peterson
Subject:	RTN 3-34098 - Re: Notice of Public Meeting and Availability of RAM Status Report - 343-351 Summer Street, Somerville, MA - RNT 3-34098
Date:	Sunday, January 07, 2018 4:08:48 PM

I am writing this formal comment in response to the updated Release Abatement Measure (RAM) Status Report dated October 24, 2017.

As we noted in our June 11, 2017 comments, the preliminary Disposal Site Boundary contains approximately 22,500 cubic yards (CY) of soil. According to LSP Bird's August 30, 2017 presentation, some 11,000 CY of soil were excavated and disposed of. This means that about half of the soil will remain on the site.

Our primary concern is with the area that will be landscaped. This includes approximately 3,725 square feet (SF) in back of the building adjacent to Hawthorne Street residences as well as 640 SF of grassy area around the MBTA vent. Based on the preliminary Disposal Site Boundary depth of 15 feet, this would amount to at least 2,425 CY of potentially contaminated and mostly untested soil with 2,069 CY along the property lines of Hawthorne Street residents. There is additional landscaping of undetermined square footage on the east and west sides of the property, as well as in the parking lot wedges.

Limited testing in the areas to be landscaped turned up Reportable Concentrations of oil by-products and lead (including the area adjacent to Nancy Iappini's property and PC-20 tested down a mere 18 inches). On December 18, 2017, LSP Nangle asserted that he would bring in 3 feet of "fill," for those areas where the soil will remain accessible. We are requesting thorough testing of areas of the site that will be landscaped, as well as a sincere discussion of whether leaving the soil in the landscaped areas in place is a better option than removing it, for both future residents of 351 Summer Street and current and future residents of the adjacent properties on Hawthorne Street.

Karina Wilkinson

On Thu, Nov 30, 2017 at 5:07 PM, Robert H. Bird, LSP <robertb@envirotrac.com> wrote:

> Please see attached notices pertaining to RTN 3-34098.

Robert H. Bird, LSP | Principal Hydrogeologist | EnviroTrac Ltd. | 2 Merchant Street Suite 2, Sharon MA 02067
781.793.0074 (Office) | 781.793.7877 (Fax) | 508.244.7111 (Cell) | robertb@envirotrac.com | vCard

---

Solutions in Action - http://www.envirotrac.com

From: George Proakis
To: iris.davis@state.ma.us; Robert H. Bird, LSP
Cc: Jeffrey Nangle
Subject: Fw: Summer Street
Date: Saturday, January 06, 2018 11:17:54 PM
Attachments: 746.02-MM-2018-01-05.pdf

Mr. Bird and Ms. Davis,

Attached are the City's comments regarding the latest on the RAM plan as presented at the December 18th meeting - as developed by city consultant Jeffrey Nangle.

Thank you,
George Proakis
City of Somerville

NANGLE CONSULTING ASSOCIATES, INC.
Environmental Engineering and Land Use Planning
45 Dan Road Suite 115 Canton, Massachusetts 02021

MEMORANDUM

TO: Hans Jensen, City of Somerville

FROM: Jeffrey A. Nangle, P.E., L.S.P.

DATE: January 5, 2018

SUBJECT: Peer Review
343-349 Summer Street
Somerville, Massachusetts

As requested, this correspondence has been prepared to summarize our peer review comments pertaining to the document entitled *"Release Abatement Measure Status Report"* dated 24 October 2017 prepared by EnviroTrac Ltd. (EnviroTrac) for Release Tracking Number (RTN) 3-34098 at the above referenced property, which was presented and discussed by EviroTrac at the recent public information session held on 18 December 2017.

EnviroTrac has rendered the opinion that the levels of Polynuclear Aromatic Hydrocarbons (PAHs) and metals remaining in soil are attributable to Anthropogenic Background as defined below and therefore not subject to consideration of capping or direct contact barriers in unrestricted earthen areas.

> Anthropogenic Background means those levels of oil and hazardous material that would exist in the absence of the disposal site of concern and which are:
> (a) attributable to atmospheric deposition of industrial process or engine emissions and are ubiquitous and consistently present in the environment at and in the vicinity of the disposal site of concern;
> (b) attributable to Historic Fill;
> (c) associated with sources specifically exempt from the definitions of disposal site or release as those terms are defined in MGL c. 21E and 310 CMR 40.0006;
> (d) releases to groundwater from a public water supply system; or
> (e) petroleum residues that are incidental to the normal operation of motor vehicles.

Technically, if it is demonstrated that the metals and PAH constituents identified at the site are attributable to Anthropogenic Background, it is correct that these constituents could be excluded from the evaluation of risk and would therefore not require the consideration of any direct contact barriers in earthen areas or require the placement of any environmental land use restrictions, i.e. Activity and Use Limitation (AUL), on the property. However, it is recommended that consideration be given to the incorporation of direct contact barriers in areas of unrestricted access where the public may be present to mitigate any actual risk, regardless of the exclusion.

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While a substantial amount of data was collected during RAM activities, there is little narrative within the RAM status report pertaining to data interpretation. During the recent public meeting, and in prior documentation, EnviroTrac has rendered the opinion that PAHs and metals exceedences are attributable to coal, coal ash or wood ash and as such would be exempt from consideration in the evaluation of risk. The fill material at the site has been characterized by EnviroTrac as follows:

- In the areas of excavation, soil from the ground surface to approximately six feet bgs was generally characterized as sand with traces of silt and clay with observed coal, coal ash, bricks, concrete, and wood (fill). Soil from six to eight feet bgs is characterized as clay. All excavated soil was transported off-site under a MassDEP Bill of Lading (BOL) to Aggregate Recycling Corporation (ARC) in Eliot, Maine. Disposal documentation is provided in Appendix A. Further details related to the management of Remediation Waste are discussed in Section 3.4.

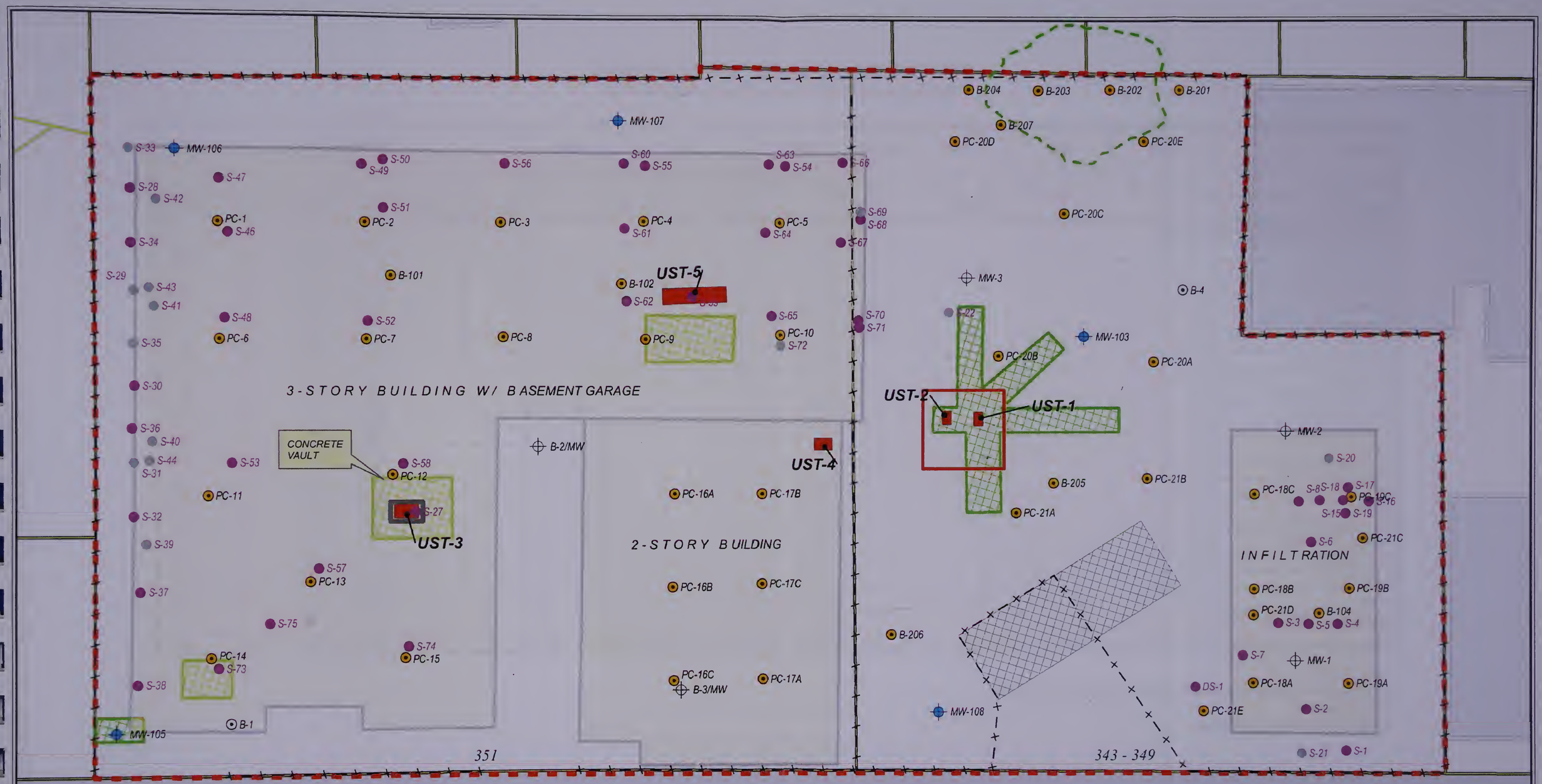
- Soil characteristics from the ground surface to approximately six feet bgs were observed to consist of sand with traces of gravel, with observed coal, coal ash, bricks, concrete, and wood (fill). Soil from six to 15 feet bgs was characterized as clay. Soil headspace readings during excavation ranged from BDL to 185.1 ppmv. All soil was excavated and transported off-site under MassDEP BOLs.

- Remediation Waste generated during the reporting period is summarized in Table 3. Approximately 10,697 tons of soil was transported and disposed of at the Clinton Landfill. Approximately 3,477 tons of soil was transported and disposed of at ARC. Disposal documentation is provided in Appendix A.

It is noted that MDEP has published guidance with respect to interpreting levels of various constituents, particularly metals, with respect to levels that would be attributable to coal ash and wood ash within fill material, with particular reference to comparison of site data to MDEP established background levels of metals.

As documented within the RAM Plan, supplemental soil sampling in northeast portions of the site (B-200 Series) revealed elevated levels of lead and PAHs (Table 1.0) just south of the property line (Figure 1) and the disposal site boundaries. It is noted that these levels were within the ranges across the subject property that had been identified during prior assessment activities, however, they are also above MDEP published background values for fill containing coal ash and/or wood ash.

Our final comment is a restatement of earlier request for a more timely submission of data as it is obtained, so that we may better advise the City as well as nearby residents concerning site conditions. As site characterization activities have been completed, this comment is directed towards the past actions of the Responsible Party (RP). It is hoped that if any changes to anticipated compliance requirements occurs prior to the development of the Release Abatement Measure (RAM) Completion Report, that this requirement will be complied with.



ENVIROTRAC SKETCH PLAN OF SITE
343-349 & 351 SUMMER ST
SOMERVILLE, MASSACHUSETTS

APPROXIMATE SAMPLE LOCATIONS

NANGLE CONSULTING ASSOCIATES, INC.
Environmental Engineering and Land Use Planning
45 Dan Road • Suite 115 • Canton • Massachusetts 02021

LEGEND

- TREE CANOPY
- SOIL BORING
- MONITORING WELL
- HISTORIC SOIL BORING
- HISTORIC MONITORING WELL

POST-EXCAVATION SOIL SAMPLE

- NOT ANALYZED
- ANALYZED

- FORMER UST LOCATION
- FENCE
- BUILDING FOOTPRINT
- MBTA VENT
- TEST PITS

RTN 3-34098
- DISPOSAL SITE BOUNDARY

RTN 3-33735
- DISPOSAL SITE BOUNDARY

NOTES

REFERENCE: Figure 2 from RAM Status Report prepared by EnviroTrac; October 24, 2017

0 25
Approximate Scale In Feet

Date: JAN 2018

Job No: 746.02

Figure 1

Table 1.0 Summary of Laboratory Analyses in Soil (mg/kg)[1]

Site Location: 343 - 351 Summer Street - Somerville, MA

SAMPLE ID	B201		B202		B203		B204	B207		B205		B206		METHOD 1 2014					
DEPTH (In Feet)	0-2'	7-8'	0-1'	7-8'	1-2'	7-8'	7-8'	0-2'	7-8'	2-3'	7-8'	2-3'	7-8'	S-1		S-2		S-3	
SAMPLE DATE	9/15/2017									9/21/2017				GW-2	GW-3	GW-2	GW-3	GW-2	GW-3
Extractable Petroleum Hydrocarbons (mg/kg)																			
C9-C18 Aliphatics	11	<10	<11	<12	<55	<12	<12	44	27	11	<12	<11	<11	1,000	1,000	3,000	3,000	5,000	5,000
C19-C36 Aliphatics	44	<10	21	<12	400	16	<12	21	19	46	13	16	<11	3,000	3,000	5,000	5,000	5,000	5,000
C11-C22 Aromatics	48	<10	30	<12	380	<12	<12	45	17	36	33	67	<11	1,000	1,000	3,000	3,000	5,000	5,000
Acenaphthene	0.28	<0.10	<0.11	<0.12	1.5	<0.12	<0.12	<0.11	<0.11	<0.11	0.2	0.3	<0.11	1,000	1,000	3,000	3,000	5,000	5,000
Acenaphthylene	<0.11	<0.10	<0.11	<0.12	<0.55	<0.12	<0.12	<0.11	<0.11	<0.11	<0.12	0.2	<0.11	600	10	600	10	600	10
Anthracene	0.9	<0.10	0.2	<0.12	3.0	<0.12	<0.12	0.3	<0.11	0.3	0.5	0.9	<0.11	1,000	1,000	3,000	3,000	5,000	5,000
Benzo(a)anthracene	1.1	<0.10	0.5	<0.12	[illegible]	<0.12	<0.12	0.5	<0.11	0.4	1.1	2.6	<0.11	7	7	40	40	300	300
Benzo(a)pyrene	1.1	<0.10	0.5	<0.12	8.3	<0.12	<0.12	0.6	<0.11	0.4	1.0	[illegible]	<0.11	2	2	7	7	30	30
Benzo(b)fluoranthene	1.5	<0.10	0.8	<0.12	14.0	<0.12	<0.12	0.8	<0.11	0.6	1.3	3.0	<0.11	7	7	40	40	300	300
Benzo(g,h,i)perylene	0.5	<0.10	0.4	<0.12	6.3	<0.12	<0.12	0.4	<0.11	0.2	0.5	1.3	<0.11	1,000	1,000	3,000	3,000	5,000	5,000
Benzo(k)fluoranthene	0.5	<0.10	0.3	<0.12	4.6	<0.12	<0.12	0.3	<0.11	0.2	0.5	1.2	<0.11	70	70	400	400	3,000	3,000
Chrysene	1.2	<0.10	0.8	<0.12	11.0	<0.12	<0.12	0.6	<0.11	0.4	1.2	2.8	<0.11	70	70	400	400	3,000	3,000
Dibenz(a,h)anthracene	0.2	<0.10	<0.11	<0.12	[illegible]	<0.12	<0.12	<0.11	<0.11	<0.11	0.2	0.4	<0.11	0.7	0.7	4	4	30	30
Fluoranthene	3.3	<0.10	1.4	<0.12	28.0	<0.12	<0.12	1.5	<0.11	1.0	2.6	5.6	<0.11	1,000	1,000	3,000	3,000	5,000	5,000
Fluorene	0.5	<0.10	0.1	<0.12	1.7	<0.12	<0.12	<0.11	<0.11	0.1	0.2	0.4	<0.11	1,000	1,000	3,000	3,000	5,000	5,000
Indeno(1,2,3-cd)pyrene	0.6	<0.10	0.3	<0.12	6.6	<0.12	<0.12	0.3	<0.11	0.3	0.6	1.5	<0.11	7	7	40	40	300	300
2-Methylnaphthalene	0.2	<0.10	<0.11	<0.12	<0.55	<0.12	<0.12	<0.11	<0.11	<0.11	<0.12	<0.11	<0.11	80	300	80	500	80	500
Naphthalene	0.3	<0.10	<0.11	<0.12	2.0	<0.12	<0.12	<0.11	<0.11	<0.11	<0.12	<0.11	<0.11	20	500	20	1,000	20	3,000
Phenanthrene	3.4	<0.10	1.1	<0.12	20.2	<0.12	<0.12	1.2	<0.11	0.8	1.7	3.2	<0.11	500	500	1,000	1,000	3,000	3,000
Pyrene	2.8	<0.10	1.2	<0.12	26.0	<0.12	<0.12	1.4	<0.11	1.0	2.3	5.3	<0.11	1,000	1,000	3,000	3,000	5,000	5,000
Total Metals (mg/kg)																			
Lead	33	4.1	46	3.3	830	13	13	52	3.5	50	86	[illegible]	2.4	200	200	600	600	600	600

File No. 746.02

<2.0 indicates not detected at or above the laboratory reporting limit specified

NA: Not Applicable

Method 1 criteria effective June 20, 2014.

somerville
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